

4. SOCIOECONOMIC RESOURCES

This section assesses the potential effect of each alternative on the social and economic human environments. The purpose of the socioeconomic and land use analysis is to determine whether the alternatives would:

- Require right-of-way acquisitions resulting in residential or business displacements
- Affect the quality of life or change community interaction within the study area
- Facilitate or disrupt access to public facilities, such as schools, emergency services, or recreational features
- Cause changes in land use that are incompatible with existing conditions and plans set forth by local planning agencies
- Cause economic changes by altering the access and travel routes to existing and planned business centers
- Cause disproportionate adverse effects on low-income or minority populations within the study area

Planning in Montgomery County

Future growth along a constructed alternative would be controlled by the County land use plans for Montgomery and Prince George's Counties, which are based upon M-NCPPC's 1964 General Plan, "On Wedges and Corridors, a General Plan for the Maryland-Washington Regional District in Montgomery and Prince George's Counties." The General Plan envisioned development radiating outward from Washington, D.C., in a series of Corridor Cities along major transportation corridors. The wedges were to be preserved for agriculture, open space, and low-density residential. These objectives are still valid and remain the basic policy guide for development in the County.

For planning purposes, Montgomery County is divided into 27 areas, with each area having a Master Plan, and some having Sector Plans, which guide development and specify the location of the proposed public infrastructure (**Figure 4-1**). A Master Plan is developed with input from a citizen Advisory Group. The general public is invited to comment at a public hearing. The County land use plans are implemented through comprehensive zoning, subdivision regulation, adequate public facility ordinances, growth management controls, farmland preservation easements, and capital improvement programs.

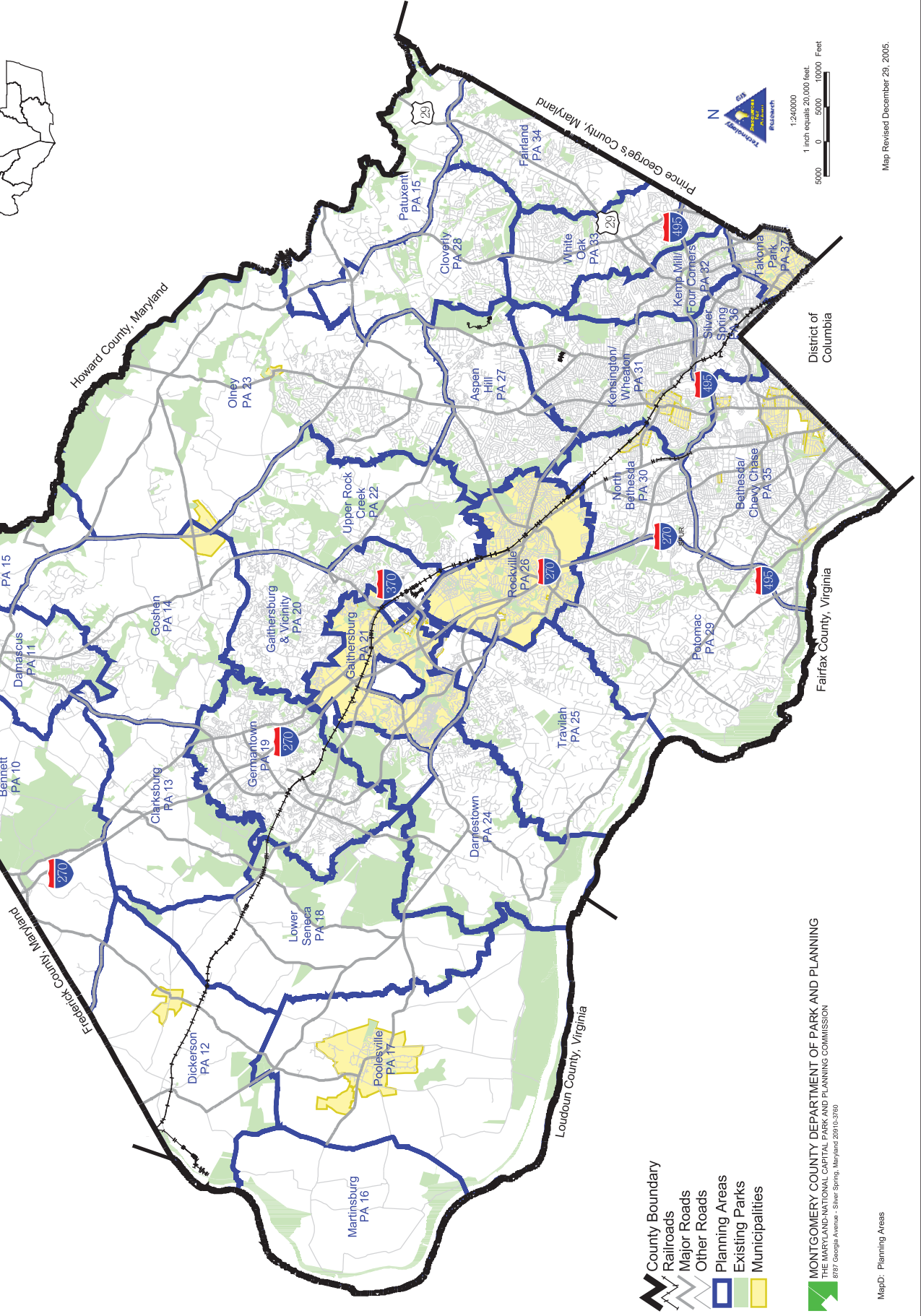
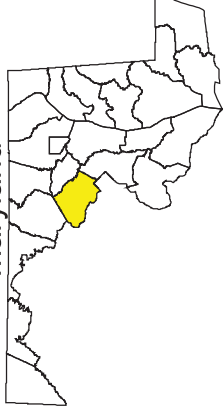
Land use in the project study area is guided and influenced by numerous comprehensive planning documents, including:

- The Montgomery County Master Plan (January 1964; Amended Dec 1969, 1993)
- Germantown Master Plan (July 1989)
- Germantown Forward – Germantown Employment Area Sector Plan (October 2009)
- Clarksburg Master Plan & Hyattstown Special Study Area (June 1994)
- City of Gaithersburg 2009 Master Plan (element updates 2010, 2011)
- Gaithersburg Vicinity Master Plan (January 1985; Amended May 1988, July 1990)
- Functional Master Plan for the Preservation of Agriculture and Rural Open Space in Montgomery County (October 1980)

Montgomery County, Maryland Planning Areas

Figure 4-1

Maryland



MONTGOMERY COUNTY DEPARTMENT OF PARK AND PLANNING
THE MARYLAND NATIONAL CAPITAL PARK AND PLANNING COMMISSION
8787 Georgia Avenue - Silver Spring, Maryland 20910-3760

- Guiding the Future of the MD 355/I-270 Corridor (January 2008)
- Great Seneca Science Corridor Master Plan – The Life Sciences Center (June 2010)
- Rustic Roads Functional Master Plan (December 1996)
- Countywide Bikeways Functional Master Plan (March 2005)
- Master Plan of Highways

Each Area Master Plan, with the exception of the Preservation of Agriculture and Rural Open Space, includes specific recommendations and objectives for development and for proposed infrastructure, including highways. The *Gaithersburg Vicinity Master Plan* endorses construction of the Midcounty Highway as a four to six-lane “Controlled Major” highway within a 150-foot right-of-way.

In the *Germantown Master Plan*, the Midcounty Highway (M-83) is proposed as a 6-lane divided “Major” highway in a 150-foot right-of-way, with a parkway quality (M-NCPPC Planning Department, 1964; Amended 1969, 1989).

In the *Clarksburg Master Plan & Hyattstown Special Study Area*, the portion of M-83 within the planning area (i.e., between Brink Road and Ridge Road) is described as a 6-lane limited access “Major” highway within a 150-foot right-of-way. The designation of the highway changes to “Arterial” A-305 at Ridge Road. From Ridge Road to Stringtown Road, A-305 is envisioned as a four-lane divided arterial within a 120-foot right-of-way. From Stringtown Road to MD 355, A-305 is envisioned as a two-lane roadway within an 80-foot right-of-way. Midcounty Highway (M-83) and Snowden Farm Parkway (A-305) are described as being designed to: provide connections between Clarksburg, Germantown, and Gaithersburg; provide traffic capacity parallel to I-270, Observation Drive (A-19), and MD 355; and provide access to residential development in the eastern areas of Clarksburg, Germantown, and Gaithersburg (M-NCPPC Planning Department. 1994).

The M-NCPPC Planning Department adheres to the following objectives in all planning areas encompassing portions of the study area for this project:

- Balance the ratio of jobs to housing in each planning area. Creating balance means designating zoning to allow as much housing as there would be employees in a planning area. This provides the opportunity to live near work, which discourages long-distance commuting that adds to congestion on the County’s arterial highways.
- Significantly expand transit service with construction of the Corridor Cities Transitway (CCT). The proposed 14-mile CCT would run from the Shady Grove Metro Station to the Comsat site in Clarksburg. The CCT is planned for construction in the 2018-2020 timeframe.
- Promote Transit Oriented Development (TOD) surrounding the CCT’s planned stations and the existing Shady Grove Metrorail Station. This objective would increase the number of transit users, reduce highway congestion, make it possible to live in nearby communities connected by transit, reduce the carbon footprint, reduce sprawl, reduce air pollution, and protect the environment.

- Accommodate pedestrian and bicycle transportation. Montgomery County has long been a proponent of pedestrian and bicycle travel as an alternative to automobile travel. This initiative was further advanced when Montgomery County incorporated the philosophy of “Complete Streets” into their context sensitive highway design guidelines (the “Road Code”), and subsequently adopted a Complete Streets Policy on April 2, 2012. The philosophy of “Complete Streets” provides accommodation of all forms of transportation, including pedestrian, bicycle, transit, and motorist, as well as the needs of the physically challenged.

These four objectives guide all future development in the MD 355/I-270 corridor. These objectives are integral to the goals of reducing dependence on single-occupant automobile commuting, reducing reliance on fossil fuels, creating a sense of place, increasing social interaction, and improving health and well-being. These principles are consistent with the principles of livable communities, as espoused by the HUD-DOT-EPA Partnership for Sustainable Communities. The Partnership’s website includes the following livability principles (<http://www.sustainablecommunities.gov>):

- Provide more transportation choices;
- Enhance economic competitiveness;
- Support existing communities;
- Value communities and neighborhoods;
- Provide equitable, affordable housing.

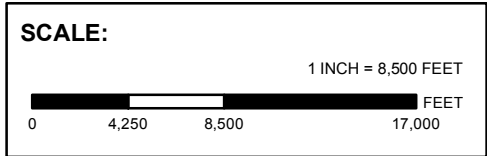
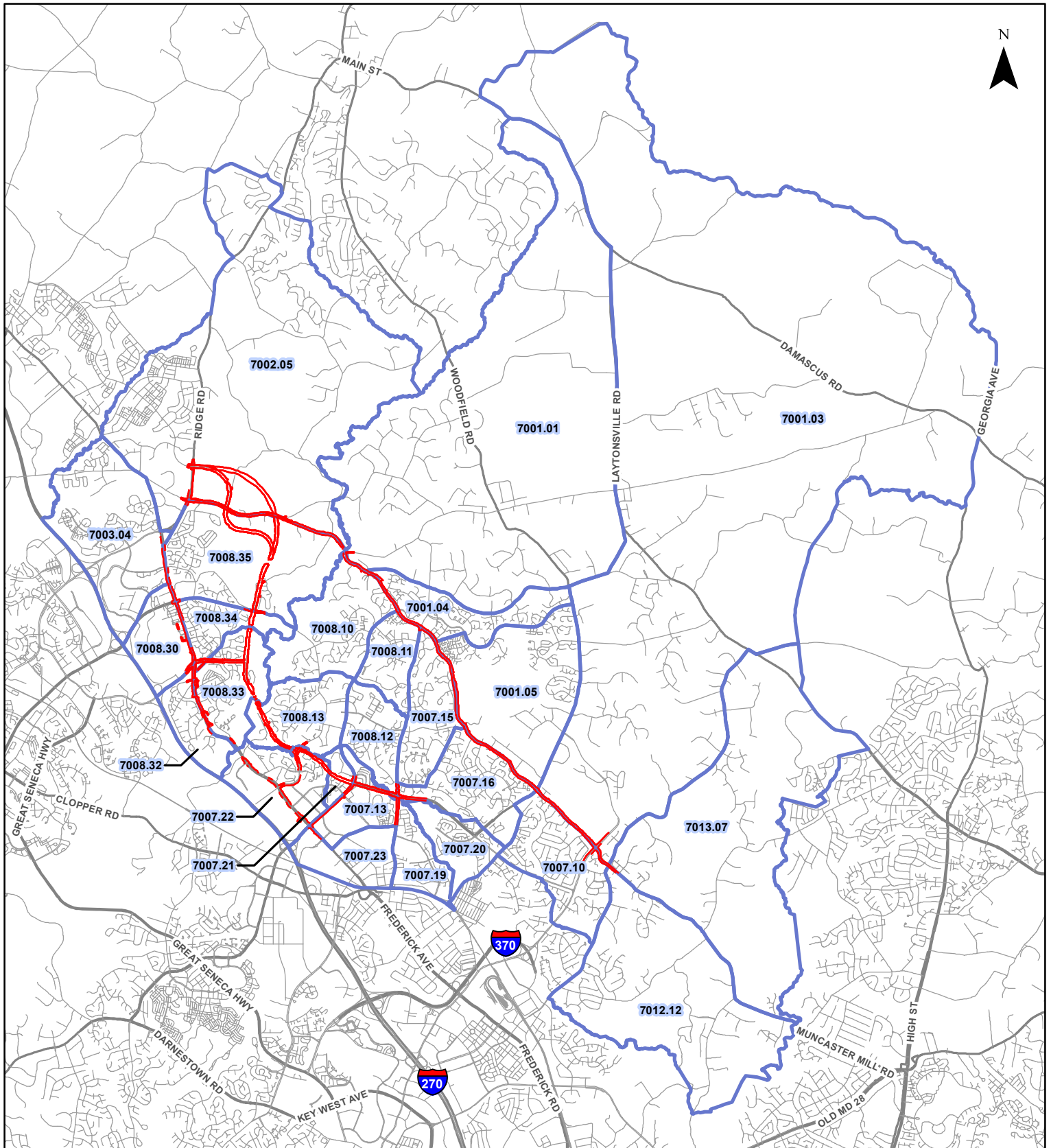
The Livable Communities Coalition website (www.livablecommunitiescoalition.org) recommends the following rules of thumb to promote smart growth:

- Serve neighborhoods with **complete streets** – streets that make walking, cycling, and transit an attractive alternative to driving;
- Construct streets in a grid pattern to give drivers a choice of routes to take, making it easier to dodge bottlenecks and traffic tie-ups;
- Invest in transit;
- Offer a regionwide mix of transit, including local bus service, express bus service, bus rapid transit, light rail, heavy rail, and commuter rail;
- Offer residents the option of affordable housing close to essential services and with easy access to nearby jobs and to transit that can take them to jobs further away.

All of these objectives are consistent with planning principles employed by the M-NCPPC Planning Department and the Montgomery County Department of Transportation in the development of the Montgomery County Master Plan and in the development of the alternatives for this study.

Socioeconomic Study Area

The socioeconomic study area boundary is a combination of the 25 U.S. Census Bureau census tracts that encompass the build alternatives (see **Figure 4-2**). Starting in 2010, census tracts became the smallest unit for which much of the demographic and income data are available.



SOURCES:
 SHA. 2005. *Maryland Centerline*. Baltimore, MD.
 US Census Bureau. *TIGER/Line Shapefile, 2010 Census Tract*.

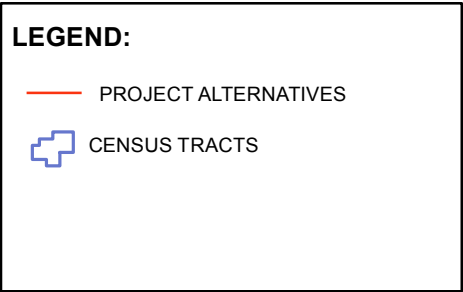


FIGURE 4-2:

**PROJECT AREA
CENSUS TRACTS**

MIDCOUNTY HIGHWAY
CORRIDOR STUDY

MONTGOMERY COUNTY, MD

4.1 Existing Land Use

Existing land uses within the study area include residential, commercial, recreational, agricultural, forest, institutional, and industrial development. The study area includes established communities and neighborhoods that contain pockets of high-density development, as well as low-density, rural, residential areas and parklands. The following describes the various existing land uses along each of the build alternatives:

Alternative 2 – Alternative 2 consists of minor intersection improvements (primarily auxiliary turning lanes) at 16 intersections. Land uses at the designated intersections include residential, open space, recreational, commercial, and institutional uses. Because improvements would be accommodated within existing highway rights-of-way, significant impacts to existing land uses are not expected.

Alternative 4 Modified – Alternative 4 Modified consists of upgrading the existing Brink, Wightman, Snouffer School, and Muncaster Mill roadways to a four to six-lane divided highway, with no controls of access. Alternative 4 Modified is bordered by established communities which were setback to accommodate an 80-foot right-of-way width along Wightman and Snouffer School Roads, and a 100-foot right-of-way width along Brink and Muncaster Mill Roads. (The proposed typical right-of-way width would vary from 105 feet for the four-lane section and 127 feet for the six-lane section.) Between Ridge Road and Redland Road, land uses are primarily residential with both high-density subdivisions and low-density, large rural lots. The alignment is interspersed with forested recreational spaces. Other key uses include the Montgomery County Airpark Industrial Park, commercial retail centers, churches, and several parochial schools. North of Kaufmann Park, residential land use consists of low-density, single-family houses on large rural lots serviced by well and septic. North of Davis Mill Road, the alternative borders farmland and a cemetery.

Alternative 5 – Alternative 5 consists of widening MD 355 to six lanes, with new service roads at select locations. The right-of-way width varies, as required to construct the service roads. Similar to Alternative 4 Modified, Alternative 5 would traverse existing residential, commercial, open space, and institutional uses. Major commercial uses include the Lakeforest Regional Mall, Fox Chapel Shopping Center, Neelsville Village Shopping Center, and Milestone Village Shopping Center; office parks; car dealerships; and industrial lands. Alternative 5 would cross the Great Seneca Stream Valley Park just north of Game Preserve Road. The Germantown Branch of the Boys and Girls Club is located southwest of Middlebrook Road. A public school, a private school, and a parochial school are located along the alternative, and one church. Two emergency responders are also located along the alternative.

Alternative 8 with Northern Terminus Options A, B, and D - While Alternatives 4 and 5 would expand the existing road network, Alternative 8 would establish a new four-lane divided highway from Ridge Road to Watkins Mill Road. The alignment generally traverses open space that has been reserved for the Midcounty Highway on the Montgomery County Master Plan. Open space areas include the North Germantown Greenway Stream Valley Park, Great Seneca Stream Valley Park, and Blohm Park. Alternative 8 would also border

the Dayspring Church Silent Retreat Center. Alternative 8 also would include the widening of Middlebrook Road to a four-lane divided highway from Midcounty Highway to MD 355, and intersection improvements along Watkins Mill Road. Existing land uses along Middlebrook Road and Watkins Mill Road include single family residences and commercial strip developments. The three Northern Terminus Options would traverse parkland, farmland, large-lot rural residential, and cemetery land uses. The proposed right-of-way width for Alternative 8 and 9 would vary from 98 – 108 feet south of Middlebrook Road and would be 131 feet north of Middlebrook Road.

Alternative 9 with Northern Terminus Options A, B, and D - Alternative 9, the Master Plan alignment, is similar to Alternative 8 between Ridge Road and the Pepco power line located just north of Watkins Mill Road. Alternative 9 would continue the new four-lane divided highway south of Watkins Mill Road, along the Master Plan alignment, to a connection with the existing Midcounty Highway at Montgomery Village Avenue. From Montgomery Village Avenue to Goshen Road, the existing Midcounty Highway would be widened to six lanes. As in Alternative 8, Middlebrook Road would be widened to a four-lane divided highway from Midcounty Highway to MD 355. Where Alternative 9 continues south of Watkins Mill Road, it would traverse open space bordered by high density (condominium and townhome) residential land uses and a public school.

The M-NCPPC Planning Department has designated the existing and future land uses with the assumption that the Midcounty Highway would be constructed in the location shown on the County Master Plan. If an alternative other than the Master Plan alternative (Alternative 9, with Northern Terminus Option A) is chosen as the Preferred Alternative, the Master Plan of Highways, as well as any Area Master Plans that include a portion of Midcounty Highway, would have to be amended to reflect the new highway location. The amendment process would include an opportunity for public input by property owners, some of whom would likely exert pressure for re-zonings based on the change. This impact is discussed in greater detail in **Section 7. Indirect and Cumulative Effects**.

4.2 Social Environment

Characteristics of the Affected Environment

The socioeconomic study area for the Midcounty Corridor Study lies entirely within Montgomery County. The study area is a suburb of Washington, D.C. and has a variety of housing densities. The study area contains portions of an incorporated city, unincorporated U.S. Census Designated Places (CDP), as well as various small unincorporated communities. These include the City of Gaithersburg, Montgomery Village, the Germantown area and vicinity, and the Clarksburg area and vicinity.

The projected population of the State of Maryland, Montgomery County, and the socioeconomic study area through 2040 is depicted in **Table 4-1**. Montgomery County is projected to increase its population to over 1.2 million people by 2040. The population of Montgomery County has grown at a faster rate than the state since before 1990, a trend that is expected to continue through 2040.

Table 4-1: Regional Population and Population Growth

	1990	2000	2010	2040 Projected	Change 1990-2000	Change 2000-2010	Projected Change 2010-2040
Maryland	4,780,753	5,296,486	5,773,552	6,861,900	10.8%	9.0%	18.9%
Montgomery County	757,027	873,341	971,777	1,204,100	15.4%	11.3%	23.9%

Source: Maryland Department of Planning Maryland State Data Center, 2012

At the time of the 2010 U.S. Census, there were approximately 125,202 persons living in the economic study area (see **Table 4-2**). The study area's population is racially and ethnically diverse with 40.4 percent White persons, 19 percent Black persons, and 14.9 percent Asian persons. Also, 22.1 percent of the study area population identify themselves as Hispanic. The study area is slightly more diverse than Montgomery County as a whole and substantially more diverse than the State of Maryland as a whole, with more than 2 ½ times the proportion of Hispanic and Asian persons.

Table 4-2: Racial Characteristics (2010)

Category	Maryland	%	Montgomery County	%	Economic Study Area (Tracts)	%
Total Population	5,773,552		971,777		125,202	
White Alone ¹	3,157,958	54.7%	478,765	49.3%	50,546	40.4%
Black Alone ¹	1,674,229	29.0%	161,689	16.6%	23,848	19.0%
Asian Alone ¹	316,694	5.5%	134,677	13.9%	18,622	14.9%
Other Alone ^{1,2}	28,199	0.5%	5,624	0.6%	803	0.6%
2 or more races Alone ¹	125,840	2.2%	25,624	2.6%	3,686	2.9%
Total Hispanic ³	470,632	8.2%	165,398	17.0%	27,697	22.1%
Total Minority	2,615,594	45.3%	493,012	50.7%	74,656	59.6%

Source: U.S. Census 2010, Summary File 1

¹ These categories do not include Hispanic or Latino individuals.

² Other includes American Indian/Alaskan Native, Native Hawaiian and Other Pacific Islander, and some other race alone. ³ Hispanic can be of any race.

Montgomery County has the second-highest County median household income in the state at \$93,373. Montgomery County also had a lower proportion of people living below the federal poverty level than the state of Maryland as a whole (see **Table 4-3**). However, the economic study area contains some census tracts with a greater proportion of people living below the federal poverty level than either Montgomery County or the State of Maryland as a whole. In the census tracts comprising the economic study area, the median household income ranges from \$50,517 to \$169,881.

Table 4-3: Income Characteristics

Geography	Median household income (dollars)		Individuals with Incomes Below Poverty Level ¹	
	Estimate	Estimate Margin of Error ²	Estimate	Estimate Margin of Error
State of Maryland	70,647	+/-262	8.6%	+/-0.2%
Montgomery County	93,373	+/-838	6.0%	+/-0.4%
Census Tract 7001.01	156,964	+/-34,109	2.2%	+/-2.2%
Census Tract 7001.03	169,881	+/-24,793	1.4%	+/-1.1%
Census Tract 7001.04	115,536	+/-13,327	6.0%	+/-5.4%
Census Tract 7001.05	101,015	+/-7,064	1.6%	+/-1.2%
Census Tract 7002.05	133,942	+/-10,850	2.6%	+/-2.2%
Census Tract 7003.04	99,353	+/-9,197	8.2%	+/-3.7%
Census Tract 7007.10	90,029	+/-9,895	5.3%	+/-4.0%
Census Tract 7007.13	53,431	+/-5,511	9.7%	+/-4.8%
Census Tract 7007.15	93,990	+/-7,390	5.4%	+/-3.7%
Census Tract 7007.16	82,917	+/-14,104	9.2%	+/-5.6%
Census Tract 7007.19	62,303	+/-6,132	16.5%	+/-7.8%
Census Tract 7007.20	85,705	+/-17,658	10.1%	+/-11.8%
Census Tract 7007.21	58,109	+/-6,626	9.6%	+/-8.2%
Census Tract 7007.22	76,971	+/-5,211	3.2%	+/-2.7%
Census Tract 7007.23	50,517	+/-16,698	12.8%	+/-4.0%
Census Tract 7008.10	96,462	+/-4,239	3.6%	+/-2.6%
Census Tract 7008.11	90,395	+/-16,018	7.2%	+/-5.9%
Census Tract 7008.12	87,614	+/-16,195	1.4%	+/-1.0%
Census Tract 7008.13	66,801	+/-12,977	9.7%	+/-4.2%
Census Tract 7008.30	65,000	+/-23,645	2.9%	+/-4.7%
Census Tract 7008.32	67,241	+/-15,585	5.1%	+/-5.4%
Census Tract 7008.33	71,545	+/-5,837	8.4%	+/-6.6%
Census Tract 7008.34	83,413	+/-20,147	10.9%	+/-3.5%
Census Tract 7008.35	126,652	+/-17,271	0.7%	+/-0.9%
Census Tract 7012.12	130,743	+/-16,293	2.0%	+/-2.7%
Census Tract 7013.07	144,511	+/-11,725	1.5%	+/-2.5%

Source: U.S. Census Bureau, 2006-2010 American Community Survey

1. Refers to people whose income in the past 12 months is below the poverty level. Poverty status is determined for all people except institutionalized people, people in military group quarters, people in college dormitories, and unrelated individuals under 15 years old (American FactFinder, <http://factfinder2.census.gov/>).
2. Due to the unavailability of socioeconomic data from the 2010 U.S. Census, median household income and current poverty status data has been derived from the American Community Survey (ACS), 5-Year Estimate. Please note that ACS data has a margin of error, which may be substantial at small geographies such as Census tracts.

According to the 2010 U.S. Census, 45,558 housing units were located in the economic study area (see **Table 4-4**). Although vacancy rates are in constant flux, the study area had lower vacancy rates than Montgomery County or the State of Maryland as a whole. Owner-occupied housing units comprised 68.5 percent of the housing units in the study area, which is higher than the owner-occupied rates of Montgomery County or the State as a whole. Housing growth in the County is anticipated to keep pace with expected population growth.

Table 4-4: Regional and Study Area Household Demographics

Category	Maryland	Montgomery County	Economic Study Area
Housing Units	2,378,814	375,905	45,558
% Owner-Occupied Households	61.2%	64.2%	68.5%
% Renter-Occupied Households	29.5%	30.8%	27.0%
% Vacant Residences	9.3%	5.0%	4.5%

Community Facilities

There are numerous community facilities within the study area. Community facilities located along each of the alternatives are identified in **Tables 4-5** through **4-8**.

Table 4-5: Community Facilities Located Along Alternative 4 Modified

Facility Name	Type of Facility
Seneca Crossing Local Park	Recreation
North Germantown Greenway Stream Valley Park	Recreation
All Souls Cemetery	Cemetery
St. Jude AME Church	Religious
Great Seneca Stream Valley Park	Recreational
Milton M. Kaufmann Park	Recreational
Northgate Community Church	Religious
Covenant United Methodist Church	Religious/Educational
William Hurley Park	Recreational
Goshen Oaks Shopping Center	Commercial/Retail
Goshen Crossing Shopping Center	Commercial/Retail
Hunters Woods Neighborhood Conservation Area	Recreational
Cabin Branch Stream Valley Park	Recreational
Lois Y. Green Conservation Park	Recreational
Nike Missile Park	Recreational
Muncaster Recreational Park	Recreational
Iglesia De Cristo Mahanaim	Religious
Covenant Life Church	Religious
New Life Seventh Day Adventist Church	Religious
Flower Hill Church of the Brethren	Religious
Washington Dongsan Presbyterian Church	Religious
Laytonia Recreational Park	Recreational
Central Baptist Church	Religious
Gaithersburg-Washington Grove Co. 28 Fire Department	Emergency Services

Source: Google Earth *Places* database in Feb. 2010., SHA 2008 *State Points of Interest*, Field Reconnaissance.

Table 4-6: Community Facilities Located Along Alternative 5

Facility Name	Type of Facility
Seneca Creek Greenway Trail	Recreation
Great Seneca Stream Valley Park	Recreation
Boys and Girls Club of America – Germantown Branch	Recreation
Montgomery College – Germantown Campus	Educational
Neelsville Middle School	Educational
Montgomery County Government Building	Government
Neelsville Presbyterian Church and Cemetery	Religious/Cemetery
Neelsville Village Shopping Center	Commercial/Retail
Milestone Village Shopping Center	Commercial/Retail
Fox Chapel Shopping Center	Commercial/Retail
Fox Chapel Elementary School	Educational
Ridge Road Recreational Park	Recreation
All Souls Cemetery	Cemetery
Seneca Crossing Local Park	Recreational
Gaithersburg-Washington Grove Co. 8 Vol. Fire Dept.	Emergency Services
Gaithersburg Library	Library
Montgomery County Fire and Rescue Service-Station 34	Emergency Services
Lakeforest Regional Shopping Mall	Commercial/Retail

Table 4-7: Community Facilities Located Along Alternative 8

Facility Name	Type of Facility
Great Seneca Stream Valley Park	Recreational
Boys and Girls Club of America – Germantown Branch	Recreational
Seneca Crossing Local Park (Option B)	Recreational
North Germantown Greenway Stream Valley Park	Recreational
All Souls Cemetery (Options A, B, D)	Cemetery
St. Jude AME (Option B)	Religious
Blohm Park	Recreational
Dayspring Church Silent Retreat Center	Religious/Community
Watkins Mill Elementary School	Educational

Table 4-8: Community Facilities Located Along Alternative 9

Facility Name	Type of Facility
Great Seneca Stream Valley Park	Recreational
Boys and Girls Club of America – Germantown Branch	Recreational
Seneca Crossing Local Park (Option B)	Recreational
North Germantown Greenway Stream Valley Park	Recreational
All Souls Cemetery (Options A, B, D)	Cemetery
St. Jude AME (Option B only)	Religious
Blohm Park	Recreational
Dayspring Church Silent Retreat Center	Religious/Community
South Valley Park	Recreational
Watkins Mill Elementary School	Educational

Enterprise Zones

An enterprise zone is an area of a county, city, or town in which state and local incentives and assistances are offered to encourage the expansion of existing businesses and attract new business investment and jobs. Enterprise zones in Maryland allow businesses within these zones to be eligible for tax incentives, such as income tax credits and real property tax credits, in return for job creation and investments made in the zone. The proposed Midcounty Corridor project area falls within the Olde Towne Enterprise Zone, aimed at making Gaithersburg's Olde Towne Central Business District "a vibrant, pedestrian-friendly urban center capable of sustaining a thriving business and residential mix." The Olde Town Enterprise Zone was designated by the State in 2008 and comprises approximately 300 acres in the City's Olde Towne Central Business District (City of Gaithersburg, 2012). None of the build alternatives encroach on the Olde Towne Enterprise Zone.

4.3 Social Impacts

Displacements

Displacements are assumed to occur when an alternative's physical limits of construction would encroach upon a building, deny access to a property, disrupt the well or septic system without replacing it, or prevent a property from fulfilling its intended use. There would be no residential or business displacements associated with Alternative 1 (No Build), Alternative 2, Alternative 8 Option A, or Alternative 9 Option A. Displacements associated with the other alternatives are summarized below.

Table 4-9: Alternatives with Residential and Business Displacements

Alternative	Residential Displacement	Business Displacement	Location of Displacement
Alternative 4 Modified	2	0	<ul style="list-style-type: none"> • 6931 Warfield Road • 7829 Muncaster Mill Road
Alternative 5	0	3	<ul style="list-style-type: none"> • Beer and Wine Store 19601 Frederick Avenue • Abandoned business 20220 Frederick Avenue • Florist 20200 Frederick Avenue
Alternative 8 Option B	1	0	<ul style="list-style-type: none"> • 21304 Lawland Court
Alternative 8 Option D	1	0	<ul style="list-style-type: none"> • 21304 Lawland Court
Alternative 9 Option B	1	0	<ul style="list-style-type: none"> • 21304 Lawland Court
Alternative 9 Option D	1	0	<ul style="list-style-type: none"> • 21304 Lawland Court

Acquisition of Property

In addition to displacing homes and businesses, the Build Alternatives would require permanent acquisition of partial parcels from residential and commercial properties. Typically these acquisitions, referred to as strip takes, occur in areas along existing highway rights-of-way. The property could be acquired to expand the width of the existing highway, accommodate new sidewalks and bike paths, or to construct retaining walls. In these circumstances, strip takes would reduce the size of the property but the structures would remain.

For the alternatives on new alignment (Alternatives 8 and 9), property acquisition would be more substantial than a strip take. However, because the new alignment has been designated on area Master Plans (as highway M-83), developers have been precluded from constructing in its path. Therefore, the acquisition of rights-of-way for master plan alignments typically does not require the purchase of homes or businesses. At some properties, retaining walls are being proposed to avoid the need for strip takes. Slope easements and construction easements would be required from most adjacent properties. Slope easements are a permanent easement for the construction of the side slopes. Construction easements are a temporary easement that accommodates up to an additional 20-foot wide disturbance for construction purposes such as equipment access, sediment ponds, and other erosion control measures. Upon completion of construction, all easements would be restored with grass or landscape plantings. The drawings of each build alternative included in this document show the limit of disturbance (LOD) which is the maximum extent of the right-of-way, including slope and construction easements, required to construct the alternative.

No residential or commercial properties would be acquired for Alternative 1 (No-Build) or Alternative 2. Each of the other alternatives would require some property acquisition, as summarized in **Table 4-10**. Alternative 5 would require the fewest number of strip takes, and Alternative 4 Modified would require the greatest number. Options B and D of Alternatives 8 and 9 are not designated on the County Master Plan, and would result in the relocation of the same residence on Lawland Court.

The table also quantifies the number of properties whose domestic water supply wells and/or septic systems could be impacted. Residences on well and septic systems occur along Brink and Wightman Roads, therefore such impacts would occur only with Alternative 4 Modified, Alternative 8 Option B, and Alternative 9 Option B. If the widening for these alternatives were to impact a well or septic system, it is common practice to restore water and sewer service by either relocating the well/septic system, or by extending public water and sewer to the affected property. Therefore, at this time, it is assumed that no residence would be displaced as a result of impacts to a well or septic system. If one of these alignments should be selected, additional investigation would be conducted during final design to determine whether it is feasible to relocate the affected well/septic system or extend public water/sewer service to the affected property.

Table 4-10: Number of Residential Properties Affected

Alternative	Number of Residential Properties	Number of Properties with Well or Septic System Impacts
Alternative 2	0	0
Alternative 4 Modified	242	20
Alternative 5	92	0
Alternative 8 Option A	96	0
Alternative 8 Option B	120	5
Alternative 8 Option D	103	3
Alternative 9 Option A	125	0
Alternative 9 Option B	149	5
Alternative 9 Option D	132	3

Mobility and Access

Each of the Build Alternatives includes project components that would affect mobility and change local vehicular access. Alternative 1, the No-Build Alternative, would not change access to properties. However, it would hinder mobility as roads become increasingly more congested over time.

Alternative 2 - Minor intersection improvements would result in elimination of congestion at all but 8 of the study area intersections evaluated in this study, resulting in travel time savings. However, because Alternative 2 would not provide a new access-controlled highway, it would not improve the efficiency of the highway network, it would not result in a reduction in traffic volumes on MD 355 compared to the No-Build Alternative, and it would require local traffic with destinations along MD 355 to continue to share the highway with regional traffic that uses MD 355 to avoid peak hour congestion on I-270.

Alternative 4 Modified - With Alternative 4 Modified, mobility along Brink Road, Wightman Road, Snouffer School Road, Muncaster Mill Road, and portions of existing Midcounty Highway would be improved by intersection improvements and the widening to four or six lanes. This additional capacity would attract more regional travel to the study area's north-south roadways than any other build alternative, slightly more than Alternative 9 (see **Figure 3-9**, which indicates the amount of traffic that would be drawn to the north-south roads in the study area with each alternative). **Figure 3-4** depicts the extent to which the study area intersections would be able to accommodate this increase in traffic. The distance of Alternative 4 Modified from MD 355 and the lack of access controls would adversely affect the amount of traffic that would divert from MD 355 to the alternative. Alternative 4 Modified would provide limited opportunity to access MD 355 and I-270 via east-west arterials.

It should also be noted that traffic volumes along Brink, Wightman, Snouffer School, and Muncaster Mill Roads would increase dramatically if Alternative 4 Modified were constructed. **Figure 4-3** shows that traffic volumes would be 60% greater on Brink Road, 80% greater on Snouffer School Road between Centerway Road and Woodfield Road, and more than double along the remaining portions of Alternative 4 Modified, compared to the

Comparison of Daily Traffic Volumes - Alt. 4 Mod.

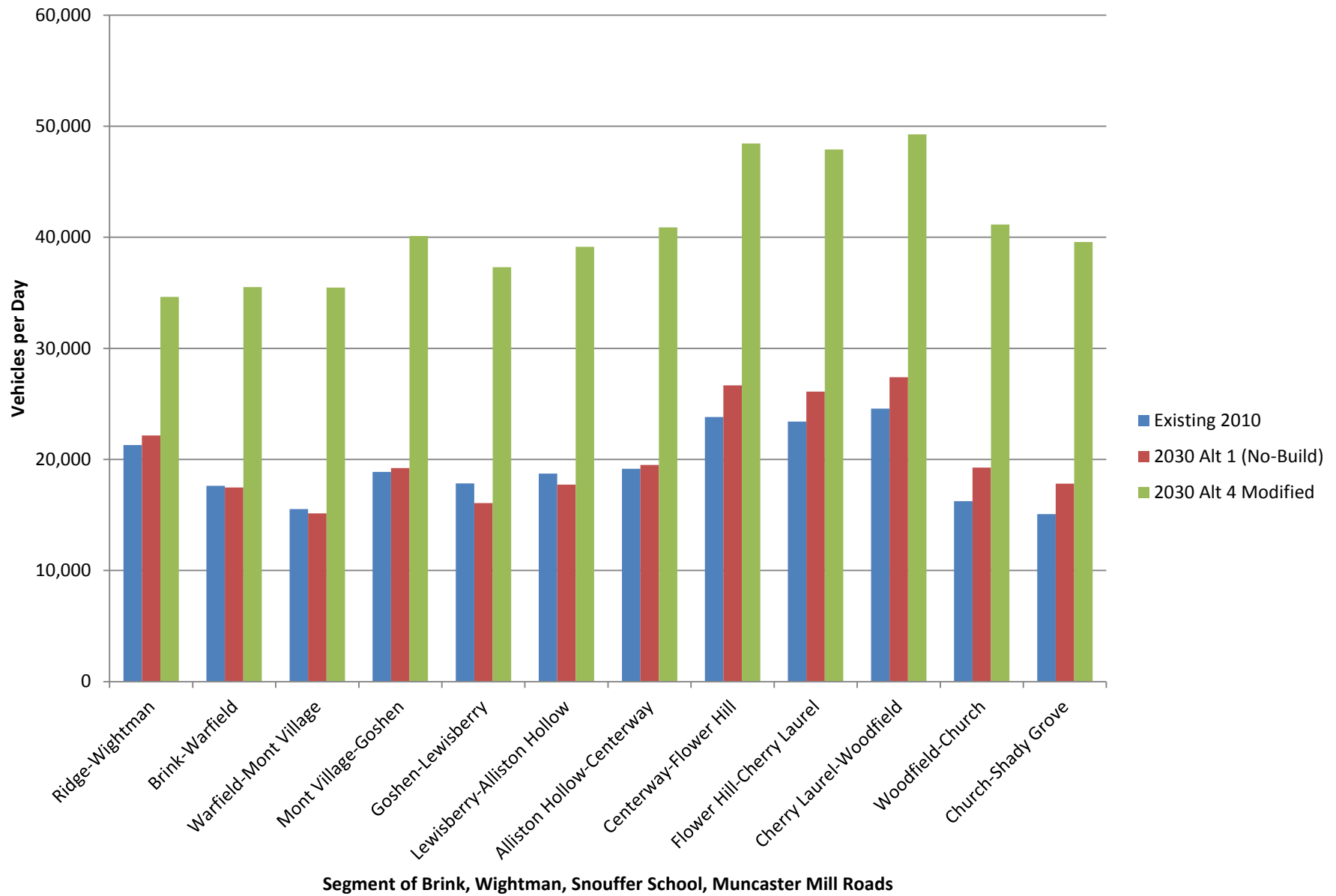


Figure 4-3

No-Build volumes. This would make access to and from adjacent properties more difficult than it is today (particularly for left turns at unsignalized intersections.)

With Alternative 4 Modified, access to residences and community facilities would be changed. The most pronounced change in local access would be caused by the addition of a median barrier along the entire Alternative 4 Modified. The median barrier would make Alternative 4 Modified a much safer facility by limiting the number of locations where left turns can be made, but it would also make access to and from existing driveways and several existing neighborhoods more circuitous. Left turns to and from individual driveways would be prohibited throughout this alternative. To make a left turn from a residential driveway, motorists would have to turn right and make a U-turn at the next available intersection. The raised median would prohibit left turns at six neighborhood entrances and three churches which currently have unrestricted access:

- Strathaven Drive in the Essex Place neighborhood
- Sparrow Valley Drive in the Overlea neighborhood
- Carriage Walk Drive in the Carriage Walk neighborhood
- Laytonia Drive in the Laytonia neighborhood
- Millcrest Drive
- Phelps Hill Lane
- St. Jude AME Church
- New Life Seventh Day Adventist
- Washington Dongsan Presbyterian Church

The proposed median would prohibit left turns out of Strathaven Drive. In order for residents of the Essex Place and Perry Place neighborhoods to make left turns out of their neighborhoods, they would have to turn right and make a U-turn at Aspenwood Lane/Wightman Road intersection (which would be unsignalized), or back-track through the neighborhood to exit the neighborhood via Aspenwood Lane, or back-track for an even longer distance through the Pleasant Ridge neighborhood to exit at the signalized intersection at Pleasant Ridge Road and Wightman Road. Some of the back-tracking would occur along very narrow streets that were never intended to be thoroughfares. Overlea residents desiring to turn left at the existing Sparrow Valley Drive/Wightman Road intersection would have to either make a U-turn at the next available intersection along Wightman Road, or back-track through the neighborhood to the Sparrow Valley Drive/Montgomery Village Avenue intersection. Motorists desiring to make left turns into or out of the Carriage Walk neighborhood would have to make a U-turn at the next available intersection along Snouffer School Road. Motorists desiring to turn left out of the Laytonia neighborhood would find it easier to turn right and make a U-turn at the Covenant Life Church (which is an unsignalized location), than to back-track through the neighborhood to an alternative intersection. Motorists exiting Phelps Hill Lane or Millcrest Drive would be required to turn right and make a U-turn at the adjacent signalized intersection. Back-tracking is not an option because there is only one entrance at each of these neighborhoods. The above-discussed changes would make access more circuitous and, in some cases, would increase traffic on existing neighborhood streets due to back-tracking through the neighborhood. Access to Phelps Hill

Lane and Laytonia Drive by emergency responders from the Gaithersburg Washington Grove Fire Company 28 would be more time-consuming.

Another concern at some neighborhoods is that the intersection at the entrance to the neighborhood would not be signalized because there is an insufficient volume of traffic to warrant a signal. One such location would be the Wellbeck Way / Snouffer School Road intersection at the Picton neighborhood. Exiting the neighborhood with a left turn onto southbound Snouffer School Road would involve waiting for a break in three lanes of northbound Snouffer School Road traffic. An alternative would be to back-track to East Village Avenue to Goshen Road to Snouffer School Road, which would result in a considerable increase in travel. Similar situations would exist at Flower Hill Way, Mountain Ash Way, Mallory Place, Sweet Autumn Drive, Ivy Oak Drive, and Miller Fall Road. At these locations, back-tracking to a signalized subdivision entrance would involve extensive travel.

If Alternative 4 Modified should ultimately be selected, additional analysis would be conducted during detailed design to ensure that access to and from each neighborhood is safe and involves a minimum of additional travel. Several measures could be considered, including a Maryland-T intersection configuration (which provides a protected refuge for left-turning vehicles), additional median openings, and additional traffic signals.

Alternative 5 - With Alternative 5, access and mobility along MD 355, Montgomery Village Avenue, and portions of existing Midcounty Highway would be affected by intersection improvements, highway widening, and construction of access roads. The intersection improvements and the relatively minor increase in capacity would reduce intersection congestion and improve travel times relative to the No-Build Alternative. However, because Alternative 5 does not provide a new access-controlled highway, there would be almost no increased travel on north-south roadways in the study area compared to the No-Build Alternative (see **Figure 3-9**). Also, local traffic with destinations on MD 355 would continue to share the roadway with regional traffic that uses MD 355 as a means of avoiding peak hour congestion on I-270.

The most pronounced change in local access would be caused by the provision of service roads. Service roads would make MD 355 a safer facility by reducing the number of locations where higher-speed traffic would conflict with slow-moving turning traffic. In addition, while a median already exists, some existing median breaks would be closed or restricted to further reduce the number of locations where left turns could be made. A median closure would make access more circuitous for traffic desiring to turn left at Neelsville Church Road or Collins Drive. In addition, the prohibition of left turns onto Boland Farm Road would require motorists to make a U-turn at Shakespeare Boulevard. Fire trucks returning to Station 34 would likely use Observation Drive to access Boland Farm Road. The intersection of Cider Press Place and MD 355 would be closed, and residents of Cider Press Place would be required to enter their neighborhood from a new service road that would be accessible at the intersection of MD 355 and Appledowre Way. This would result in a shorter drive from northbound MD 355 and a slightly longer drive to and from southbound MD 355. Access to the Oak Mill community and the Boys and Girls Club would

be from a new service road which could be entered at Appledowre Way. Access from the Oak Mill community to southbound MD 355 would be longer. For the Boys and Girls Club, access to northbound MD 355 would be shorter and access to southbound MD 355 would be longer. Residents of the Middlebrook Mobile Home Park would continue to be permitted to make right-in/right-out movements from northbound MD 355. However, one driveway would be closed, and an internal road constructed to connect the two entrances. This new road would remove a large tree that buffers the highway from existing trailers. Residences on the east side of MD 355 between Scenery Drive and Plummer Drive would no longer be able to directly access their driveway from MD 355. Instead, they would use a new service road that would be accessible at Plummer Drive. The service road would make access to northbound MD 355 longer while making access to southbound MD 355 shorter.

Alternative 8 – Alternative 8 would improve mobility through the provision of a new access-controlled highway which would tie into Watkins Mill Road. Travel times on the area's north-south roadways would be reduced compared to the No Build scenario. Alternative 8 would divert traffic from MD 355 but with diminished effectiveness toward the southern end of the alternative, where the gap between Alternative 8 and the existing Midcounty Highway would result in higher traffic volumes on MD 355 and some intersections with unacceptable congestion. The projected diversion of traffic from MD 355 would be about the same as with Alternative 4 Modified, which would be substantially less than the diversion that would occur under Alternative 9.

Alternative 8 would change the access to several communities. In the Seneca-Whetstone neighborhood, motorists on Gatlin Drive would be prohibited from driving straight across Alternative 8 to the opposite side of their community. In order to access the opposite side of the neighborhood, motorists at the Gatlin Drive intersection would be required to turn right and make a U-turn at a median opening approximately 900 feet from the intersection. In addition, left turns would be prohibited from the western side of the neighborhood to northbound Alternative 8. Both of these restrictions would be imposed to reduce the potential for accidents at this unsignalized intersection. Left turns from the eastern portion of the neighborhood to southbound Alternative 8 would be permitted.

Improvements to Middlebrook Road would prohibit left turns out of the neighborhoods at Minstrel Tune Way, Brandermill Drive, Knollcross Drive, and Madrigal Drives. Instead, motorists would be required to turn right and make a U-turn at the signalized Scenery Drive intersection. While this would inconvenience drivers leaving their neighborhood, the proposed intersection with Alternative 8 at Middlebrook Road would provide a substantial improvement in mobility for these same residents.

The Watkins Meadow neighborhood would have access to and from Alternative 8 at both the Blunt Road entrance and the Watkins Meadow Drive entrance to the neighborhood. However, the neighborhood could experience an increase in cut-through traffic on Blunt Road as more up-county residents utilize Blunt Road as a convenient access to the new highway.

Left turns onto Watkins Mill Road would be prohibited out of The Point Apartment Complex from Watkins Station Circle, requiring residents to make a right turn onto Watkins Mill Road

followed by a U-turn at MD 355. New traffic signals would make turns safer at the existing intersections of Watkins Mill Road/Russell Avenue and Watkins Mill Road/Travis Avenue, and at the new intersection of Alternative 8/Watkins Mill Road. The Windbrooke neighborhood would have a new entrance that would accommodate all turning movements to and from Watkins Mill Road.

With Alternative 8, the the portion of existing Midcounty Highway from Montgomery Village Avenue to Goshen Road would be widened to six lanes to facilitate access to I-270. The additional number of lanes and the increased traffic would make left turns more difficult at the entrance to the Nathan's Hill neighborhood. However, with Alternative 8, traffic volumes along this existing portion of Midcounty Highway would be lower (36,925 vehicles per day) than with Alternative 9 (43,500) or with the No Build Alternative (44,575).

Northern Terminus Options - With Option A of Alternative 8, the Midcounty Highway would cross Brink Road at Wildcat Road, and continue along Wildcat Road for a distance of approximately 1000 feet where a new intersection with Wildcat Road would be proposed. Option B and Option D would include a new intersection at Brink Road, and both options would cut between the Lawland Court and Glendevon Court communities, displacing one of the Lawland Court residences. In addition, Option D would include a raised median along Brink Road for a distance of approximately 2000 feet, which would prohibit left turns to and from several residential driveways. Option B would incorporate a widened Brink Road for a distance of just over one mile. A raised median would prohibit left turns at driveways, but all turning movements would be allowed at the unsignalized intersections along this widened portion of Brink Road. Traffic desiring to continue north to Clarksburg or south to Gaithersburg would be required to make three turns in a 1.5-mile stretch of highway along Brink Road and Ridge Road. These turning movements would result in weaving and extremely long queues at intersections, causing safety concerns and unacceptable congestion. The numerous access points (driveways and signalized/unsignalized intersections) along the Brink Road portion of Option B would be inconsistent with the access controls along the remainder of the Midcounty Highway. By incorporating an existing local road into the alignment for Alternative 8, regional Midcounty Highway traffic would mix with local Brink Road traffic, increasing the potential for accidents. Due to safety and operational concerns, MCDOT does not consider Option B to be a viable option.

Alternative 9 - Alternative 9 would follow the same alignment as Alternative 8 from Snowden Farm Parkway to Watkins Mill Road, resulting in impacts identical to those described above for Alternative 8, with the exception of the impacts resulting from improvements along Watkins Mill Road (which are not part of Alternative 9). South of Watkins Mill Road, Alternative 9 would continue along the Master Plan alignment to the existing Midcounty Highway/Montgomery Village Avenue intersection.

Left turns would be prohibited onto Watkins Mill Road from the Windbrooke neighborhood. Residents desiring to travel westbound on Watkins Mill Road would be required to turn right and make a U-turn at the Watkins Mill Road/Alternative 9 intersection. Existing Midcounty Highway between Montgomery Village Avenue and Goshen Road would be widened to six lanes. The additional number of lanes and the increased traffic would make left turns more

difficult at the entrance to the Nathan's Hill neighborhood. In addition, parking would be temporarily reduced at Nathan's Hill and in the Cider Mill Apartment complex during construction.

Community Cohesion

A community's cohesion is negatively affected when neighborhoods are divided or there is a significant reduction in the number of neighborhood homes due to displacements. Generally, the build alternatives would be along existing transportation corridors or along a right-of-way that has been reserved for transportation use for decades. No impacts to community cohesion are expected to occur with Alternative 1 (No-Build), Alternative 2, or Alternative 5.

Alternative 4 Modified - With Alternative 4 Modified, community cohesion would be affected in Montgomery Village. Members of the neighborhoods along Wightman Road have expressed concern that the proposed wider cross section of Wightman Road, combined with a projected doubling of traffic, would make pedestrian crossings of the highway more dangerous. For example, this would affect residents living on the east side of Wightman Road who frequent the Montgomery Village recreational amenities on the west side of the road, such as the North Creek Community Center and the North Creek Lake Park and Nature Center, as well as Great Seneca Stream Valley Park. Residents located east of Wightman Road in the Essex Place, Perry Place, and Pleasant Ridge communities have indicated they access these recreational facilities to hike, bike, jog, and swim. In addition, residents have expressed concern about the safety of their children waiting for the school bus along Wightman Road. Currently, pedestrians and bicyclists can safely cross Wightman Road and Snouffer School Road at the Montgomery Village Avenue intersection, the Goshen Road intersection, and the Chesley Knoll-Lewisberry Drive intersection. All three intersections are currently signalized and have striped cross walks. With Alternative 4 Modified, these three intersections would be increased to five to six-through lanes plus turning lanes. Traffic volumes would more than double along this portion of Alternative 4 Modified compared to existing (2010) traffic volumes. To address pedestrian and bicyclist safety, Alternative 4 Modified would include sidewalks, a shared use path, on-street bicycle lanes, striped cross walks, and traffic signals with a pedestrian phase.

Alternatives 8 and 9 - Under Alternatives 8 and 9, community cohesion would be affected at Gatlin Drive where a new Midcounty Highway would divide the Seneca-Whetstone community. Residents on either side of the alternative would find it difficult to interact with their neighbors on the opposite side. The Gatlin Drive intersection would not have sufficient volume of vehicular or pedestrian cross-traffic to warrant a traffic signal. In addition, with the auxiliary turning lanes, the cross section of Midcounty Highway at this intersection would be 6 lanes wide, making it very difficult for pedestrians to cross the highway without the benefit of a signal to stop vehicular traffic. To simplify operations and improve safety, the planned configuration of the intersection would prohibit vehicles from driving straight across Midcounty Highway. To access their neighbors on the opposite side of the new highway, motorists would be required to turn right at Gatlin Drive, and make a U-turn at the proposed median opening approximately 900 feet away. Today, Seneca-Whetstone is very quiet and secluded because it is accessible only from Game Preserve Road. With

Alternatives 8 and 9, the Gatlin Drive intersection with Midcounty Highway would allow motorists to cut through the community to access MD 355. If this alternative were subsequently identified as the Preferred Alternative, additional coordination would be undertaken with the community to determine preferences for accommodating vehicular and pedestrian access.

Noise Impacts

All Build Alternatives have the potential to introduce or increase traffic noise. Alternatives 8 and 9 would introduce a new highway into areas which are currently not subjected to highway noise, including parkland, Dayspring Church Silent Retreat Center, farmland, a cemetery, and remote neighborhoods. Alternative 4 Modified would change a two-lane road into a four to six-lane highway, resulting in additional noise attributable to both an increase in traffic volumes as well as highway widening that moves the traffic closer to the residences. Given the minor widening proposed with Alternative 5 and the minor increase in highway lane capacity, Alternative 5 would not produce a substantial increase in noise levels. Therefore, the perceived change in noise levels would likely be less with this alternative.

Montgomery County implemented a *Highway Noise Abatement Policy* in October 2001, which was last revised in April, 2010. The primary focus of that policy is residential land use. Consideration is also given to properties where serenity and quiet are of extraordinary significance and the preservation of those qualities is essential if the property is to continue to serve its intended purpose. The noise policy does not apply to active recreation areas (such as ball fields and playgrounds) or commercial/industrial areas.

In accordance with the Montgomery County Highway Noise Abatement Policy, residences which are exposed to noise levels of 67 dBA or higher with the project are considered to be “impacted” by highway noise, and eligible for consideration of noise abatement measures. The fact that a residence may already be exposed to noise levels above 67 dBA does not disqualify it for consideration of noise mitigation. The mapping of each build alternative in the **Appendix** of this document depicts an *approximation* of the 67 dBA noise contour based on projections of traffic in year 2030. These approximations are being provided to give residents an indication of the locations where impacts are likely to occur. Detailed noise modeling will be conducted after a Preferred Alternative has been selected, and only for the Preferred Alternative. Based on detailed noise modeling, the location of the 67 dBA noise contour may change somewhat. The estimated number of residential properties potentially impacted by noise is summarized in **Table 4-11**.

Table 4-11: Number of Residential Properties Potentially Impacted by Noise

Alternative	4 Mod	5	8A	8B	8D	9A	9B	9D
No. Properties Impacted	417	228	114	125	114	217	234	217

The Dayspring Church Silent Retreat Center offers many types of retreats, including silent retreats that provide a setting which is appropriate for meditation and reflection. Solitude and silence are essential elements of such retreats. The proximity of a new regional highway

along Alternative 8 or 9 would introduce a visual and audible intrusion into the pastoral setting. The 67 dBA noise contour would extend onto Dayspring property a distance of 80 feet from the proposed sidewalk along the southbound lanes of Alternative 9, and 70 feet from the proposed sidewalk along the southbound lanes of Alternative 8. Consequently, the property would be impacted by noise.

Decisions on mitigation are generally made during final design. In order for a community to be eligible to receive a noise barrier, the barrier must satisfy the criteria for feasibility and reasonableness. The following factors are evaluated in the feasibility analysis:

- If the effectiveness of a noise barrier would be compromised by frequent openings for pedestrian or vehicular access, or would cause a safety problem such as limiting the motorist's sight distance, the barrier will not be considered feasible.
- The barrier must be able to achieve a minimum reduction of seven decibels for receptors with the highest noise levels (typically the first row of receptors in an existing development).

To determine whether a barrier is reasonable, the following criteria would be considered:

- The total cost of a proposed barrier, including any modifications that may be necessary to existing landscaping, drainage systems, and utility relocations, will be divided by the number of benefitted residences (a residence is considered to benefit where the barrier would achieve a 3 dBA reduction in noise). The cost-per-benefitted residence must not exceed \$100,000.
- If barriers are deemed to have negative visual and/or property value impacts, or result in undue negative impacts on the environment or historic resources, the barriers will not be considered reasonable.
- The proposed noise mitigation measures must be approved by 60% of the benefitted property owners.

Construction Noise Impacts

Land uses that are sensitive to vehicular noise will also be sensitive to temporary construction noise. Sensitive land uses located 100 feet from the construction could expect to experience noise levels between 78 dBA and 83 dBA. Construction activity will generally occur during normal working hours on weekdays. However, some construction could potentially occur at night, such as work that requires a lane closure, to take advantage of lighter traffic volumes. The Montgomery County Noise Control Ordinance limits construction noise to 75 dBA on residential properties weekdays from 7:00 a.m. to 5 p.m., and to 55 dBA on residential properties from 10:00 p.m. to 7:00 a.m. Equipment that produces noise levels in excess of 85 dBA during the day is subject to a noise suppression plan. Noise levels will be monitored and managed during construction to ensure local noise ordinances are not exceeded at sensitive receptors.

Visual and Aesthetic Character

All build alternatives and options would alter the visual environment. The effect of this change in view depends on the existing visual characteristics of the area, the distance

between homes and the highway, and whether the facility is elevated, at-grade, or depressed. There are several areas where the proposed facility would alter the visual elements of a community. Potential impacts include loss of vegetative buffers and introduction of new visual elements near residences, churches, schools, recreational facilities, parks, and trails.

Alternative 2 would create slight changes to aesthetic character where intersections would be improved by the additional of turning lanes. Paved surfaces would increase slightly and existing green space would be reduced.

Alternative 4 Modified would result in a change in the identity and character of the existing corridor. The semi-rural Brink Road would be widened to a four-lane divided highway that would have no traffic signals or stop signs for the two-mile stretch between Ridge Road and Wightman Road. This would attract regional traffic to the highway (including from MD 97 via Sundown Road to Brink Road) and make projected traffic volumes on Brink Road 60% higher than under the No-Build Alternative. The widened highway would be closer to the residences along Brink Road. Retaining walls are proposed along some properties to reduce the strip take. Wightman Road, between Brink Road and Aspenwood Lane, is a winding stretch of road that currently satisfies only a 30 MPH design speed. Upgrading this stretch to a 40 MPH design both horizontally and vertically would necessitate shifting the alignment into Milton M. Kaufmann Park, and the incorporation of retaining walls along much of this segment of Alternative 4 Modified, with some walls being 5 to 9 feet taller than the adjacent yards. A residence at the Wightman Road/Warfield Road intersection would be displaced.

Between Aspenwood Lane and Goshen Road, Wightman Road would be widened to a four to six-lane highway, encroaching into the back yards of single-family residences and the common space of townhouse developments. Retaining walls would be proposed on both sides of the highway from Montgomery Village Avenue to Goshen Road. Between Goshen Road and Ridge Heights Drive, a six-lane cross section would reduce the distance between the highway and homes in Hunters Woods, Picton, and Meadowgate neighborhoods. A retaining wall would be required adjacent to several homes in the Hunters Woods neighborhood. Along the proposed Montgomery County Multi-Agency Service Park, the widening has been shifted onto County property. Between Centerway Road and Woodfield Road, the alignment is positioned to balance the strip takes between the commercial/industrial properties to the east (that would lose parking spaces), and the townhouses to the west (that would lose vegetative buffer). Along Muncaster Mill Road, the widening was shifted eastward into Muncaster Recreational Park and Laytonia Recreational Park to reduce impacts to the Laytonia and Millcreek Towne neighborhoods. One residence would be displaced along the east side of Muncaster Mill Road, just south of Woodfield Road. The Muncaster Mill Road/Shady Grove Road intersection would be widened substantially to accommodate additional through lanes and turning lanes needed to improve the intersection operation.

Alternative 4 Modified would transform the character of the roadway from a winding, two-lane road through rural Goshen and suburban Montgomery Village to a four to six-lane divided major arterial which would attract traffic from other routes, more than double the volume, enable this traffic to travel at higher speeds, and change the traffic mix from locally-

oriented to a combination of local and regional traffic. The change would be most notable in the northern portion of the project where the roadway widening would impact mature woodland buffers and would significantly increase the size and scale of the roadway in this rural residential area within the Agricultural Reserve.

Alternative 5 would introduce one additional through lane in each direction of MD 355 between Ridge Road and Middlebrook Road, and service roads at various locations. For the most part, these changes would be consistent with the existing visual environment, which is comprised of high density residential and commercial development. Between Scenery Drive and Plummer Drive, a service road on the east side is proposed along a residential area to reduce the number of driveways entering the highway. This would result in the loss of a substantial portion of the front yard at nine residences, including existing landscape trees that buffer the homes from the road. A few other scattered residences along Alternative 5 would lose a portion of their front, rear, or side yard.

Alternatives 8 and 9 - Portions of Alternative 8 and 9 would introduce a new four-lane highway where wooded areas, farmland, or fields currently stand. Along other portions of the alignment (Middlebrook Road, Wayfarer Road, existing Midcounty Highway near Grassy Knoll Terrace, and Wildcat Road) existing two-lane roads would be converted to a four-lane highway. Potential impacts include loss of scenic natural lands, a change in aesthetic character (particularly for adjacent residences and the Watkins Mill Elementary School that currently border parkland or open space), alteration of the quiet, rustic setting at the Dayspring Church Silent Retreat Center, and a substantial change in the rustic setting and passive recreational experience in Great Seneca Stream Valley Park, North Germantown Greenway Stream Valley Park, Blohm Park, and South Valley Park. The bird-watching pavilion in Blohm Park would be displaced with Alternative 8. The bird-watching pavilion would be avoided with Alternative 9, but the proximity of the new highway would substantially impair the bird-watching experience. (Park impacts are discussed in more detail below).

Retaining walls would also introduce a new visual element along the alignment near Windbrooke, Gatlin Drive and Game Preserve Road, Grassy Knoll Terrace, Watkins Meadow Drive/Sandsfield Terrace, and Treva Court (Option B only). The alignment of Option B and D would displace a residence on Lawland Court and alter the quiet setting of the Lawland Court and Glendevon Court neighborhoods with the introduction of a new highway.

Parks and Other Community Facilities

There are multiple parks and other community facilities in close proximity to the alternatives, including churches, schools, recreational facilities, and emergency services. Impacts would vary depending upon the proximity of the resources and the scope of the proposed highway.

Alternative 4 Modified would impact the following parks: Seneca Crossing Local Park, North Germantown Greenway Stream Valley Park, Great Seneca Stream Valley Park, Milton M. Kaufmann Park, Hunters Woods Neighborhood Conservation Area, Cabin Branch Stream Valley Park, Lois Y. Green Conservation Park, Nike Missile Park, Muncaster Recreational

Park, and Laytonia Recreational Park. Impacts would include property acquisition, changes in access, and loss of parking. The parkland acquisition would not affect any active recreational facilities in the parks. Left turns would be prohibited at the entrance to Lois Y. Green Conservation Park and Nike Missile Park, necessitating a U-turn at the nearest intersection. An informal parking area along the shoulder of Wightman Road would be eliminated at Great Seneca Stream Valley Park where a new four-lane bridge would replace the existing two-lane bridge. At Kaufmann Park, which is owned by the Montgomery Village Foundation, the parking lot and entrance would be partially impacted and retaining walls constructed. However, the impacted parking spaces would be replaced. Approximately 19.4 acres of parkland would be acquired by Alternative 4 Modified, of which 15.4 acres is located in parkland owned by Montgomery County or M-NCPPC (see **Table 4-12**).

A number of churches would also be impacted by strip takes including St. Jude AME Church (minimally impacted), North Gate Community Church, Covenant United Methodist Church, Covenant Life Church, New Life Seventh Day Adventist Church, Flower Hill Church of the Brethren, Washington Dongsan Presbyterian Church, and Central Baptist Church. Retaining walls would be constructed at Covenant United Methodist Church, Covenant Life Church, and New Life Seventh Day Adventist Church. Washington Grove Volunteer Fire Department Co. 28 and the Derwood Post Office would also be minimally affected by strip takes.

Alternative 5 would impact the Germantown Branch of the Boys and Girls Club and Great Seneca Stream Valley Park by requiring minor strip takes adjacent to MD 355. Approximately 0.2 acres of parkland owned by Montgomery County would be impacted by Alternative 5. Minor strip takes would also be required from Neelsville Presbyterian Church and Neelsville Middle School.

Alternatives 8 & 9 and Northern Terminus Options - For Alternative 8 and Alternative 9, potential impacts to parks and community facilities at the northern end of the project would be dependent on the option selected for the northern terminus. Option D would cross the location of a planned extension of Goshen Recreational Park along Wildcat Branch and traverse the rear portion of the All Souls Cemetery. Option A would be adjacent to the actively-used portion of the Cemetery. All options of Alternatives 8 and 9 would bisect the North Germantown Greenway Stream Valley Park, fragmenting wildlife habitat and habitat for Forest Interior Dwelling Species (FIDS) of birds. All options would provide a 280-foot long bridge over Dayspring Creek with 16-foot underclearance for deer passage. Option A would traverse this park for a longer distance (approximately 2/3-mile longer) than Option B or Option D. Option A would also be closer to the natural resources valued by the M-NCPPC Parks Department (County-rare plants, mature forest, rock outcrops) and would affect a more scenic portion of the park containing a picturesque stream cascading over bedrock terraces with a hillside covered in mountain laurel. All northern terminus options would also impact the Dayspring Church Silent Retreat Center by introducing visual and audible changes to the existing setting, and by the acquisition of a narrow strip of right-of-way adjacent to Wayfarer Road. Representatives of Dayspring have expressed concern with the potential noise impacts, visual impacts, forest/grassland impacts, and stream water quality impacts. From their perspective, impacts to these resources would have a negative effect on

the current use of the site (silent retreat, religious center, environmental education) and on wildlife, including FIDS and grassland nesting birds.

Alternative 8 and 9 would also traverse Great Seneca Stream Valley Park and Blohm Park. Impacts would include property acquisition; loss of trees, grasslands, and wildlife habitat; changes in visual character; noise impacts; and impacts to the passive recreation experience. The 500-foot long bridge over Seneca Creek would provide 17 feet of underclearance for wildlife passage. In Blohm Park, Alternative 8 would displace the bird-watching pavilion. Alternative 9 would avoid the pavilion, but the proximity of the highway would reduce the bird presence in the area. Parking is currently prohibited on Watkins Mill Road at the Park, and there is no parking lot on park property. With Alternative 9, a two-span, 230-foot bridge is proposed over Whetstone Run within Blohm Park. The bridge would require a relocation of Whetstone Run, and result in 11 feet of underclearance, which is sufficient underclearance for the hiking trail and wildlife passage. With Alternative 8, a 220-foot, single span bridge is proposed over Whetstone Run. The single span bridge would avoid the need to relocate Whetstone Run. However, the deeper beams required for a single-span bridge would result in only 7-8 feet of underclearance. With Alternatives 8 and 9, the hiking trail would be partially relocated to pass beneath the bridge. Discussions are on-going with City of Gaithersburg officials concerning the mitigation of these impacts (see **Appendix - Agency Correspondence**). Alternative 9 would also impact South Valley Park due to the proximity of the highway, which would substantially alter the fishing, hiking, and passive recreation experience.

Table 4-12: Impacts to Parkland

Alternative	2	4 Mod	5	8A	8B	8D	9A	9B	9D
Total (acres)	0	19.4	0.2	45.2	30.6	29.6	48.1	33.5	32.5
County & M-NCPPC owned Park (acres)	0	15.4	0.2	43.3	28.7	27.7	45.5	30.9	29.9

4.4 Environmental Justice

Presidential Executive Order 12898, *General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires a consideration of disproportionately high and/or adverse human health or environmental effects on minority and low-income populations and communities. “Minority” is defined as Black, Hispanic, Asian American, American Indian/Native Alaskan, or Native Hawaiian/Pacific Islander. “Low-income” is defined as an income at or below the poverty level, as determined by the Department of Health and Human Services guidelines. The Council on Environmental Quality (CEQ) guidelines state that minority populations should be identified as environmental justice populations where either (1) the minority population of affected areas exceeds 50 percent, or (2) the minority population percentage of an affected area is meaningfully greater than the minority population percentage of the general population or other appropriate unit of geographic analysis. For this analysis, the same criteria were used for low-income populations.

Methodology

For this study, the methodology for meeting environmental justice requirements consists of the following steps:

- Defining the project area boundary and identifying census tracts within the project area;
- Setting thresholds for minority and low-income populations;
- Identifying the location of environmental justice populations based on thresholds;
- Reviewing supplemental data that could offer more insight into the location of minority or low-income persons;
- Analyzing the location and severity of anticipated impacts associated with the alignment options of the project; and
- Determining any potential disproportionate high and adverse impacts, full and fair access, and denial of benefits to environmental justice populations.

The U.S. Census 2010 tract data provided the basis for establishing the location of environmental justice populations in the project study corridor. The boundary for the environmental justice analysis includes the census tracts that contain, or are adjacent to, any of the project alternatives. Twenty five census tracts were included.

Using CEQ guidelines, census tracts where 50% or more of the residents are minority constitute environmental justice populations. Nineteen census tracts exceed this threshold (see **Table 4-13 and Figure 4-4**). Using the same threshold for low-income populations, no census tracts were identified as environmental justice populations. To be more inclusive of low-income populations and in accordance with the CEQ guidelines' concept of "meaningfully greater," census tracts that exceeded 12%, which is twice the Montgomery County proportion of persons living below the poverty level, are also considered an environmental justice population for purposes of this analysis. Two census tracts exceeded the 12% threshold (see **Table 4-14 and Figure 4-4**).

Supplemental Data

The National Center for Educational Statistics (NCES) provides demographic information for the public school student population. Its 2009-2010 Common Core of Data (the most recent available), provides racial composition and the number of students that are eligible for free or reduced lunches for each public school. Populations within school districts can be a good indicator of the community as a whole. Eligibility for free and reduced-price lunches is determined by students' family income in relation to the federally established poverty level. Students whose family income is at or below 130 percent of the poverty level qualify to receive free lunch, and students whose family income is between 130 percent and 185 percent of the poverty level qualify to receive reduced-price lunch (NCES, 2012).

The data from NCES confirms the identification of environmental justice census tracts as shown on **Figure 4-3**. In addition, the portion of census tract 7002.05 between Brink Road and Northern Terminus Option D is included within an elementary school district that would qualify as an environmental justice community. The southern portion of census tract 7001.01

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Table 4-13: Study Area Census Tracts that Meet or Exceed Environmental Justice Minority Population Thresholds (Shaded)

Montgomery County Census Tract	Total	White ¹	% White	Black or African ¹	% Black or African	Asian ¹	% Asian	Other ^{1,2}	% Other	Two or More Races	% Two or More Races	Hispanic or Latino ³	% Hispanic or Latino	Total Minority	% Total Minority
7001.01	4,321	3,245	75.1%	340	7.9%	304	7.0%	20	0.5%	107	2.5%	305	7.1%	1,076	24.9%
7001.03	5,864	3,895	66.4%	520	8.9%	809	13.8%	45	0.8%	138	2.4%	457	7.8%	1,969	33.6%
7001.04	5,356	2,533	47.3%	1,285	24.0%	483	9.0%	31	0.6%	138	2.6%	886	16.5%	2,823	52.7%
7001.05	6,528	2,706	41.5%	1,366	20.9%	1,005	15.4%	40	0.6%	200	3.1%	1,211	18.6%	3,822	58.5%
7002.05	6,312	4,470	70.8%	352	5.6%	769	12.2%	10	0.2%	161	2.6%	550	8.7%	1,842	29.2%
7003.04	7,692	2,622	34.1%	1,251	16.3%	2,532	32.9%	40	0.5%	297	3.9%	950	12.4%	5,070	65.9%
7007.10	6,888	2,428	35.2%	1,040	15.1%	1,128	16.4%	34	0.5%	190	2.8%	2,068	30.0%	4,460	64.8%
7007.13	5,471	985	18.0%	1,327	24.3%	783	14.3%	58	1.1%	143	2.6%	2,175	39.8%	4,486	82.0%
7007.15	5,969	1,908	32.0%	1,212	20.3%	780	13.1%	75	1.3%	192	3.2%	1,802	30.2%	4,061	68.0%
7007.16	7,729	2,710	35.1%	1,498	19.4%	1,561	20.2%	36	0.5%	278	3.6%	1,646	21.3%	5,019	64.9%
7007.19	7,590	1,191	15.7%	1,507	19.9%	847	11.2%	47	0.6%	146	1.9%	3,852	50.8%	6,399	84.3%
7007.21	2,621	962	36.7%	642	24.5%	308	11.8%	20	0.8%	90	3.4%	599	22.9%	1,659	63.3%
7007.22	4,418	1,347	30.5%	1,126	25.5%	764	17.3%	42	1.0%	163	3.7%	976	22.1%	3,071	69.5%
7007.23	3,387	2,046	60.4%	596	17.6%	267	7.9%	27	0.8%	74	2.2%	377	11.1%	1,341	39.6%
7008.10	5,142	2,211	43.0%	1,229	23.9%	533	10.4%	25	0.5%	134	2.6%	1,010	19.6%	2,931	57.0%
7008.11	4,591	1,407	30.6%	1,318	28.7%	349	7.6%	26	0.6%	127	2.8%	1,364	29.7%	3,184	69.4%
7008.12	4,177	1,921	46.0%	723	17.3%	398	9.5%	26	0.6%	129	3.1%	980	23.5%	2,256	54.0%
7008.13	5,626	2,112	37.5%	1,244	22.1%	517	9.2%	53	0.9%	187	3.3%	1,513	26.9%	3,514	62.5%
7008.30	2,520	580	23.0%	817	32.4%	546	21.7%	23	0.9%	75	3.0%	479	19.0%	1,940	77.0%
7008.32	2,958	800	27.0%	708	23.9%	232	7.8%	27	0.9%	70	2.4%	1,121	37.9%	2,158	73.0%
7008.33	4,251	1,160	27.3%	866	20.4%	894	21.0%	20	0.5%	119	2.8%	1,192	28.0%	3,091	72.7%
7008.34	4,885	1,406	28.8%	1,523	31.2%	630	12.9%	24	0.5%	178	3.6%	1,124	23.0%	3,479	71.2%
7008.35	4,616	1,791	38.8%	732	15.9%	1,327	28.7%	13	0.3%	164	3.6%	589	12.8%	2,825	61.2%
7012.12	2,714	1,828	67.4%	187	6.9%	332	12.2%	18	0.7%	89	3.3%	260	9.6%	886	32.6%
7013.07	3,576	2,282	63.8%	439	12.3%	524	14.7%	23	0.6%	97	2.7%	211	5.9%	1,294	36.2%

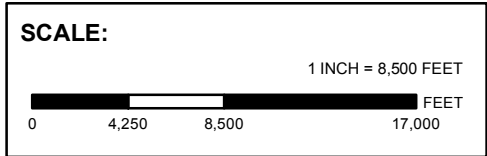
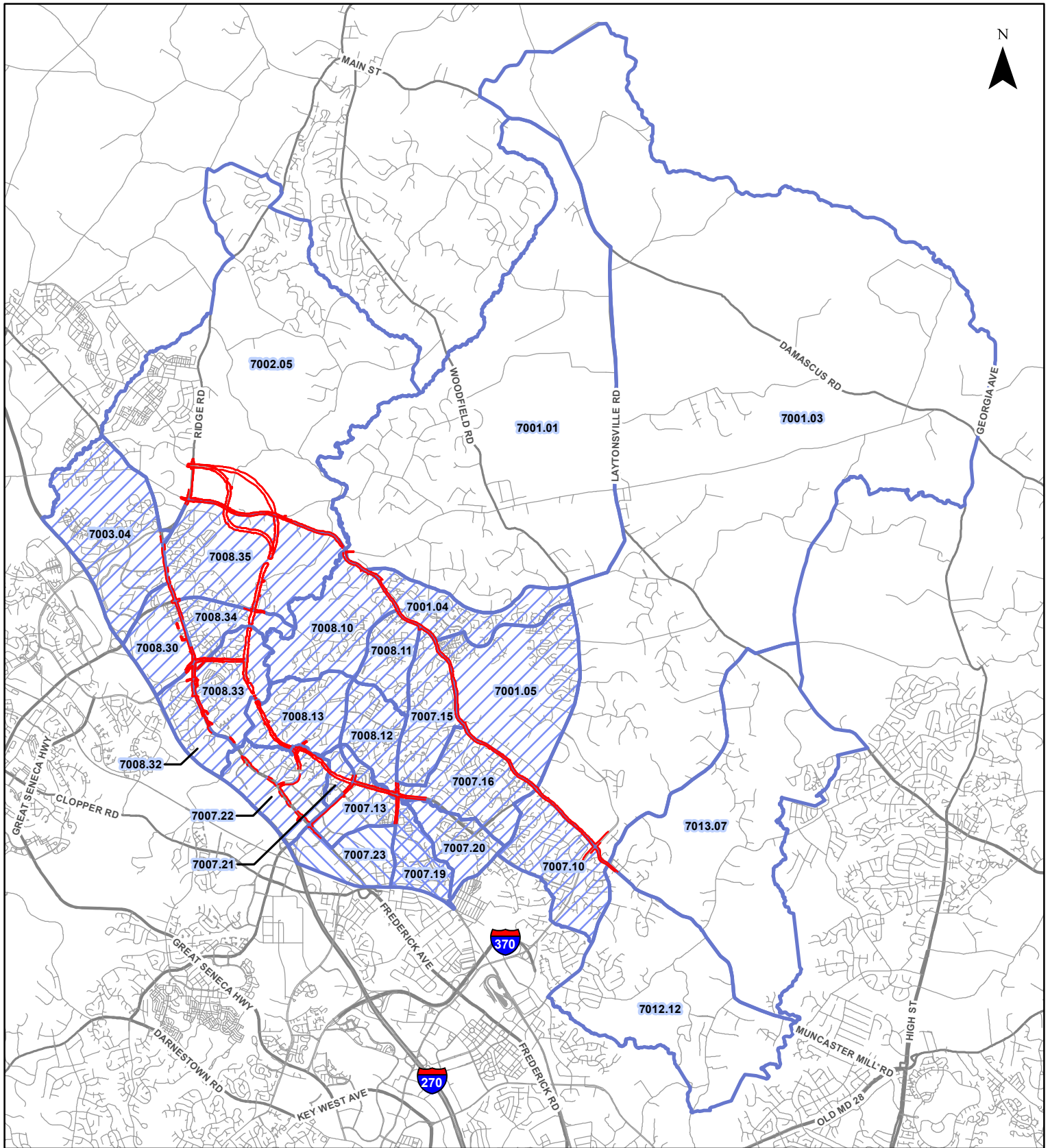
Source: U.S. Census 2010, Summary File 1. Shaded cells indicate census tracts with minority population that exceeds the threshold set for an environmental justice community

Table 4-14: Study Area Census Tracts that Meet or Exceed Environmental Justice Low-Income Population Thresholds (Shaded)

Geography	Median household income (dollars)		Individuals with Incomes Below Poverty Level ¹	
	Estimate	Estimate Margin of Error ²	Estimate	Estimate Margin of Error ²
State of Maryland	70,647	+/-262	8.6%	+/-0.2%
Montgomery County	93,373	+/-838	6.0%	+/-0.4%
Census Tract 7001.01	156,964	+/-34,109	2.2%	+/-2.2%
Census Tract 7001.03	169,881	+/-24,793	1.4%	+/-1.1%
Census Tract 7001.04	115,536	+/-13,327	6.0%	+/-5.4%
Census Tract 7001.05	101,015	+/-7,064	1.6%	+/-1.2%
Census Tract 7002.05	133,942	+/-10,850	2.6%	+/-2.2%
Census Tract 7003.04	99,353	+/-9,197	8.2%	+/-3.7%
Census Tract 7007.10	90,029	+/-9,895	5.3%	+/-4.0%
Census Tract 7007.13	53,431	+/-5,511	9.7%	+/-4.8%
Census Tract 7007.15	93,990	+/-7,390	5.4%	+/-3.7%
Census Tract 7007.16	82,917	+/-14,104	9.2%	+/-5.6%
Census Tract 7007.19	62,303	+/-6,132	16.5%	+/-7.8%
Census Tract 7007.21	58,109	+/-6,626	9.6%	+/-8.2%
Census Tract 7007.22	76,971	+/-5,211	3.2%	+/-2.7%
Census Tract 7007.23	50,517	+/-16,698	12.8%	+/-4.0%
Census Tract 7008.10	96,462	+/-4,239	3.6%	+/-2.6%
Census Tract 7008.11	90,395	+/-16,018	7.2%	+/-5.9%
Census Tract 7008.12	87,614	+/-16,195	1.4%	+/-1.0%
Census Tract 7008.13	66,801	+/-12,977	9.7%	+/-4.2%
Census Tract 7008.30	65,000	+/-23,645	2.9%	+/-4.7%
Census Tract 7008.32	67,241	+/-15,585	5.1%	+/-5.4%
Census Tract 7008.33	71,545	+/-5,837	8.4%	+/-6.6%
Census Tract 7008.34	83,413	+/-20,147	10.9%	+/-3.5%
Census Tract 7008.35	126,652	+/-17,271	0.7%	+/-0.9%
Census Tract 7012.12	130,743	+/-16,293	2.0%	+/-2.7%
Census Tract 7013.07	144,511	+/-11,725	1.5%	+/-2.5%

Source: U.S. Census Bureau, 2006-2010 American Community Survey

1. Refers to people whose income in the past 12 months is below the poverty level. Poverty status is determined for all people except institutionalized people, people in military group quarters, people in college dormitories, and unrelated individuals under 15 years old (American FactFinder, <http://factfinder2.census.gov/>).
2. Due to the unavailability of socioeconomic data from the 2010 U.S. Census, median household income and current poverty status data has been derived from the American Community Survey (ACS), 5-Year Estimate. Please note that ACS data has a margin of error, which may be substantial at small geographies such as Census tracts.
3. Threshold set at 12% - Census Tracts with a proportion of persons in poverty over twice that of the county percent of 6%. Shaded census tracts indicate a percentage over 12% in poverty



SOURCES:
 SHA. 2005. *Maryland Centerline*. Baltimore, MD.
 US Census Bureau. *TIGER/Line Shapefile, 2010 Census Tract*.

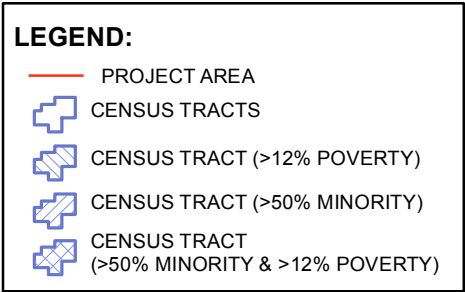


FIGURE 4-4:
 CENSUS TRACTS WITH
 CONCENTRATED LOW-INCOME OR
 MINORITY POPULATIONS
 MIDCOUNTY HIGHWAY
 CORRIDOR STUDY
 MONTGOMERY COUNTY, MD



and the southern portion of census tract 7001.03 also include an elementary school district that would qualify as an environmental justice community. Therefore, every build alternative is contained entirely within an environmental justice census tract or school district.

Prathertown

Located west of Wightman Road, the community of Prathertown was founded by freed slaves in 1883 with the purchase of a 13-acre parcel of land. Few descendants of the founders currently live in the community. Several residences in the area may have an association with the original Prathertown community, including the Benson House and the Posey House (which would be demolished under Alternative 4 Modified). Prathertown is located within an environmental justice census tract.

Government Assisted Housing Programs

In the study area, the Housing Opportunities Commission (HOC) of Montgomery County, the Family Services Agency, Inc., and St. Luke's House, Inc. provide housing assistance for low-income persons. The locations of this low-income housing were obtained from HUD and HOC websites. The housing locations vary in type and include apartments and townhomes. None of the properties identified are directly affected by the build alternatives.

Environmental Justice Effects

The physical locations of potential adverse impacts to the man-made and natural environment were identified for the purpose of determining whether patterns or concentrations of adverse effects would be disproportionately high and adverse on environmental justice populations. In general, it has been determined that all areas that contain environmental justice populations would experience benefits or adverse effects similar to those of the overall study area population. Environmental justice populations would not be denied any benefits afforded by the implementation of any Build Alternative.

The effects of Alternative 1, such as increased congestion and travel time, would be similar for all communities, regardless of race or income. Alternative 1 would not entail substantial changes to the physical environment, such as impacts to property or loss of natural resources. Therefore, high and disproportionately adverse effects to minority or low-income communities are not anticipated for Alternative 1.

Alternative 2 would include minor improvements such as the addition of auxiliary lanes, signal timing adjustments, and pedestrian crossings. Impacts would be expected to be minor, and could include changes to the visual character. High and disproportionately adverse effects to minority or low-income communities are not anticipated for Alternative 2.

The locations of potential impacts associated with the other build alternatives were examined to understand the potential for high and disproportionate adverse effects on environmental justice populations.

Residential Displacements

Residential displacements are not anticipated under Alternative 5, Alternative 8 Option A, or Alternative 9 Option A. Alternative 4 Modified would require two displacements, both from an environmental justice census tract and/or school district. Alternative 8, Option B and Option D and Alternative 9, Option B and Option D would all require the same residential displacement from Lawland Court, which is within an environmental justice census tract and school district. It has not been determined whether the specific properties that would be displaced are owned by a minority or low-income resident. Given the low number of displacements, high and disproportionately adverse effects to minority or low-income persons due to residential displacement are not anticipated.

Property Acquisition

In addition to displacing homes, all the Build Alternatives would require acquisition strip takes from residential or commercial properties, reducing the size of the property but avoiding the structures. Almost every census tract in the project study area would incur property acquisition impacts of this nature, and every census tract incurring these impacts is an environmental justice census tract. These acquisitions would be along many miles of existing roadways and the highway reservation, and are not concentrated in any particular minority or low-income neighborhoods. Therefore, property acquisition impacts would not contribute to any disproportionately high or adverse impacts on environmental justice communities.

Access and Mobility

Each of the build alternatives includes components that would change local access and mobility. As previously discussed, Alternative 4 Modified and Alternative 5 would have the most impacts on access and mobility. These changes would occur throughout the alternatives, and are not limited to any particular low-income or minority neighborhoods.

With Alternative 4 Modified, access and circulation at Essex Place, Overlea, Picton, and Carriage Walk were previously discussed. Along Alternative 5, access to the Middlebrook Mobile Home Park would be modified slightly, but no residents would be displaced.

Community Cohesion

Potential community cohesion impacts were identified in two areas: with Alternative 4 Modified along Wightman Road at the neighborhoods of Essex Place, Perry Place, and Pleasant Ridge; and with Alternatives 8 and 9 at Gatlin Drive in the Seneca-Whetstone neighborhood. According to M-NCPPC Planning Department demographic data, both areas are in environmental justice census blocks. Community cohesion impacts are not anticipated under Alternative 5. The concerns at Essex Place, Perry Place, and Pleasant Ridge would be mitigated through the provision of improved pedestrian and bicycle accommodations. If Alternative 8 or 9 were ultimately selected as the Preferred Alternative, coordination would be undertaken with the Seneca-Whetstone neighborhood regarding methods to maintain vehicular and pedestrian access and to address community cohesion.

Noise

All build alternatives have the potential to introduce or increase traffic noise. Portions of Alternatives 8 and 9 would introduce a highway facility into areas that are not currently exposed to highway noise, including parkland, farmland, a silent retreat, and neighborhoods. Alternative 4 Modified would change a two-lane road into a four to six-lane highway, increasing noise at adjacent residences due to the highway widening and due to a doubling of projected traffic. These impacts would occur throughout the build alternatives, and are not concentrated, directed, or limited to minority or low-income communities. Consideration of noise mitigation will be undertaken for the alternative which is subsequently identified as the Preferred Alternative.

Visual and Aesthetic Character

All build alternatives and options would change the visual environment. Alternatives 8 and 9 would introduce a major highway facility into the viewshed of several parks, a silent retreat, and an elementary school within environmental justice census tracts. Alternative 4 Modified would change the visual character of adjacent communities due to the magnitude of the highway expansion, construction of retaining walls, and the loss of existing vegetative buffers along the corridor. The Alternative 5 improvements would generally be consistent with the existing character of the MD 355 corridor; however, the improvements would encroach onto some residential properties. These impacts would occur throughout the build alternatives, and are not concentrated, directed, or limited to minority or low-income communities.

Parks and Other Community Facilities

Because all the census tracts that encompass the project alternatives qualify as environmental justice areas, no one park serves environmental justice communities more than any other park. As noted previously, pedestrian access from Montgomery Village neighborhoods east of Wightman Road to community recreational facilities west of Wightman Road would be affected by Alternative 4 Modified. For the Boys and Girls Club, access to northbound MD 355 would be shorter and access to southbound MD 355 would be longer. Other community facilities such as churches and schools would also experience adverse effects, as previously discussed, that could include one or more of the following: property acquisition, increased noise, altered viewsheds, and prohibition of left turns at the entrance. Generally, the build alternatives would adversely affect many parks and community facilities, primarily by property acquisition and the introduction of visual and audible impacts. These adverse impacts are anticipated to affect the regions' population equally, regardless of demographic. Therefore, the adverse effects to parks and community facilities are neither higher nor disproportionate on environmental justice populations.

Conclusions

Environmental justice communities are prevalent throughout the study area and are affected by every build alternative. The build alternatives do not concentrate, direct, or limit impacts to minority or low-income communities. As the planning process continues, the various impacts on environmental justice communities will be studied in greater detail and

communication with affected property owners will continue. At the request of individual communities, MCDOT will meet with affected communities to discuss further reduction of impacts.

Efforts to Engage in Full and Fair Participation

In order to engage in and provide for the full and fair participation of potentially affected environmental justice communities within the study area, the following strategies were implemented:

- Meeting with community and civic associations in the project vicinity;
- Mailing newsletters and meeting notification letters to the project mailing list; which includes environmental justice populations;
- Posting project information including mapping, newsletters, previous studies, and contact information on the Midcounty Corridor Study webpage;
- Providing the opportunity for comments and concerns to be posted on the webpage.

There has been an on-going commitment to provide full and fair access to information throughout this study process. As the project progresses through final design and construction, coordination with affected persons would continue, to further mitigate community concerns.

4.5 Economic Environment

Regional Employment Characteristics

The proposed Midcounty Highway is located in Montgomery County approximately 15 miles northwest of Washington, D.C. and roughly 10 miles outside the Capital Beltway (I-495). The project area is embedded within the Washington, DC metropolitan area via I-270, I-495, I-370 and MD 200, the Brunswick MARC Rail Line, the Metrorail Red Line, and the proposed Corridor Cities Transitway.

The project area is surrounded by established communities with high-density development located within the metropolitan Washington region. According to the Constrained Long-Range Plan (CLRP), the “inner suburbs” (which include Montgomery County) are expected to experience a 28 percent increase in population from 2,760,000 in 2002 to 3,530,000 in 2030, and a 46 percent increase in employment from 1,460,000 in 2002 to 2,120,000 in 2030.

Metropolitan Washington Council of Governments (MWCOC) is responsible for maintaining and updating regional population and employment figures for regional planning purposes. According to MWCOC’s employment data for 2005 and projections for 2040, Montgomery County’s population is projected to increase by 29.0 percent. Over the same time period, Montgomery County is expected to experience a 44.6 percent increase in employment (MWCOC, 2010a).

Montgomery County is home to a wealth of federal research and regulatory agencies, including the following in the MD 355/I-270 corridor:

- National Institute of Standards and Technology

- U.S. Department of Energy
- National Institutes of Health
- U.S. Consumer Product Safety Commission
- Uniformed Services University of Health Sciences
- U.S. Department of Health & Human Services, Agency for Health Care Research & Quality
- Nuclear Regulatory Commission
- U.S. Marine Mammal Commission

Montgomery County is home to numerous Fortune 500 company headquarters, including the following in the MD 355/I-270 corridor:

- Lockheed Martin
- Marriott International
- Coventry Health Care
- Catalyst Health Solutions
- Host Hotels & Resorts

The MD 355/I-270 corridor links employment centers in Montgomery County to Washington, DC and Frederick County, and has emerged as a world class center for advanced technology and biotechnology industries. The corridor includes a regional shopping center, parklands, and cultural destinations. Five major employers with more than 1,000 employees occur within the study area: Lockheed Martin (4,759), Montgomery College (3,500), Kaiser Permanente (2,604), IBM (1,423), and Hughes Communications (1,200).

Substantial population and employment growth projections in both the study area and the greater metropolitan region indicate a growing need to relieve existing and projected traffic congestion; improve safety and network efficiency; and provide bike and pedestrian connections between residential, recreational, and employment destinations.

Based on American Community Survey (ACS) data, approximately 59.4 percent of workers living in Montgomery County worked inside their county of residence, roughly six percent higher than the statewide average. For transportation to work, a substantial portion of Montgomery County workers (76.4 percent) used a car, truck or van. The fact that 17.5 percent of workers used transit, walked, or used a bicycle to reach work (6 percent higher than the statewide average) reinforces the need for pedestrian, bicycle, and other infrastructure to support multi-modal transportation.

ACS data collected between 2006 and 2010 shows that 67 percent of Montgomery County's adult population participates in the labor force. Montgomery County accounts for nearly 17 percent of the State's available workforce, as shown in **Table 4-15**. The unemployment rate for the State of Maryland is lower than the rate for the United States, and the unemployment rate for Montgomery County is lower than the rate for the State of Maryland.

Table 4-15: Employment Rates

Area	Unemployment Rate	Margin of Error*	Participation in Workforce	Margin of Error*
United States	7.9%	+/-0.1%	59.4%	+/-0.1%
Maryland	6.6%	+/-0.1%	65.2%	+/-0.2%
Montgomery Co.	5.2%	+/-0.2%	67%	+/-0.5%

Source: U.S. Census Bureau, 2006-2010 American Community Survey

*Due to the unavailability of socioeconomic data from the 2010 US Census, employment rate data has been derived from the American Community Survey (ACS), 5-Year Estimate. Please note that ACS data has a margin of error.

Between 2007 and 2009, the county per capita income was \$46,506, compared to the statewide average of \$34,384. In terms of educational attainment, 56.1 percent of Montgomery County residents have a bachelor's degree or higher level of educational attainment. The highly educated workforce is instrumental to attracting jobs in the technology sector.

As shown in **Table 4-16**, 17 percent of the employed population in Montgomery County works in a government-related industry. The remaining 83 percent work in the private sector.

Table 4-16: Employment by Industry

Industry	Total Employed Montgomery County	% of Employed Population
Total	464,833	100%
<i>Government Total</i>	78,250	17%
Federal	39,785	8.6%
State	1,068	0.2%
Local	37,397	8%
<i>Private Sector Total</i>	386,583	83%
Natural Resources & Mining	745	0.2%
Construction	30,891	6.6%
Manufacturing	14,303	3.1%
Trade, Transportation & Utilities	64,349	13.8%
Information	15,208	3.3%
Financial Activities	35,797	7.7%
Professional & Business Services	106,477	22.9%
Education & Health Services	58,365	12.6%
Leisure & Hospitality	37,878	8.1%
Other Services/Unclassified	22,570	4.9%

Source: Maryland Department of Labor, Licensing and Regulation. Date of data: 2006

Local Employment Characteristics

The study area consists of established residential communities interspersed with shopping centers that contain retail, service, and office uses including: the Fox Chapel Shopping Center, Milestone Shopping Center, Middlebrook Square, Neelsville Village Shopping

Center, Goshen Crossing, Goshen Oaks, and Redmill Shopping Center. A regional shopping center, the Lakeforest Mall, is also located in the study area. Smaller local retail and service establishments contain strip mall commercial development. Major high tech employers, including IBM, Kaiser Permanente, and Lockheed Martin, are located along MD 355 between Montgomery Village Avenue and Germantown Road, and Hughes Communications is located between MD 355 and I-270. The Germantown Technology Center, Montgomery College (Germantown Campus), and the planned Montgomery College Life Sciences Park are also clustered between I-270 and MD 355. Holy Cross Germantown Hospital is currently under construction. The corridor contains a growing population that will rely heavily on the local road network to access these employment opportunities.

4.6 Economic Impacts

Near-Term Development

Tables 4-17 through 4-19 depict the magnitude of the future development that could be constructed, consistent with Area Master Plans. These are the development projections at “build-out.” Build-out is projected to occur beyond the Midcounty Corridor Study’s 2030 design year.

Table 4-17: Existing, Approved, Pipeline,&1994 Clarksburg Master Plan Development

	Existing	Approved Prelim. Plans	Development Pipeline- Approved but Not Constructed	1994 Master Plan
Dwellings ¹	5,500	9,891	4,981	14,930
Commercial (sf)	1,253,834	3,894,791	3,303,352	10,311,000
Jobs at Build-out ²				32,360

¹ 1994 Master Plan projections included a 22% MPDU density increase ‘where applicable’

² Jobs to Housing Ratio – 2.17 (approx)

Table 4-18: Germantown Employment Area Existing and Proposed Development

	Existing	Approved but Not Constructed	1989 Master Plan	2009 Master Plan ³
Dwellings ¹	6,214	263	6,379	16,418
Commercial (sf)	8,077,085	3,241,729	18,552,310	24,104,248
Jobs ²	23,080	9,260	53,000	68,870

¹ Not including bonus dwelling units that may be applicable

² Number of jobs rounded, at build-out

³ Approximately 650 dwelling units and 3,339,000 SF of non-residential space would be demolished and redeveloped

Source:

http://www.montgomeryplanning.org/community/germantown/documents/GermantownMasterPlanApprovedandAdopted_web.pdf

Table 4-19: City of Gaithersburg Existing and Proposed Development

	Existing (2010)	Pipeline	Planned Growth by 2030	Planned Growth by 2040
Dwellings	8,760	3,170	13,299	15,854
Jobs	28,457	7,935	41,222	50,762

The M-NCPPC Planning Department was consulted to determine the amount of development in the study area that is in the development pipeline (i.e., has been approved but is not yet constructed). The following **Table 4-20** summarizes the projects in the development pipeline, and the expected generation of new employment associated with this development.

Table 4-20: Pipeline Dwelling Units and Commercial Space Approved in the Study Area

Area Master Plan	Number of Properties	Approved Unbuilt Dwelling Units	Approved Unbuilt Floor Area	Job Creation Potential of Unbuilt Development				
				Retail	Office	Indus	Other	Total Jobs
Clarksburg	7	2,143	324,218	760	0	0	41	801
Germantown Sector Plan Area	5	22	1,197,759	444	4,080	0	0	4,524
Gaithersburg Vicinity	4	51	24,867	62	0	0	0	62
City of Gaithersburg	20	2,408	506,040	312	1,439	0	0	1,751
Great Seneca Science Corridor	1	0	12,700	0	51	0	0	51
Agricultural and Rural	2	16	8,000	0	0	0	5	5
Total	39	4,632	2,073,584	1,578	5,570	0	46	7,194

Source: Montgomery County Development Pipeline (as of March 2012), M-NCPPC Planning Department

Regional Economic Effects

A new or improved highway near the MD 355/I-270 corridor would support growth of the Technology Corridor by adding highway capacity and improving connections between employment areas, residential clusters, universities, research facilities, federal facilities, and retail centers. New transportation capacity and connections would create competitive advantages for manufacturing and R&D in the corridor. Not only would employees have improved access, reduced travel time, and reduced congestion along their commutes, but businesses would have improved access to regional and interstate markets and more rapid delivery of raw materials and finished products, resulting in increased market share. The Technology Corridor is Montgomery County's economic engine, accounting for 60% of the

County's jobs, 73% of its industrial acreage, 81% of its office space, and 56% of its retail sales. The corridor also provides a significant portion of the County's remaining development capacity - 72% of future households in the County and 83% of future jobs. (According to the April 2010 TPAR, 43% of the future households and 50% of the future jobs would be in the study area). The Master Plan envisioned a highway on new location, with controls of access between intersections, to provide a high-type facility that would divert regional traffic from MD 355. This would free-up capacity on MD 355 to accommodate local trips with destinations to existing and proposed development located in the MD 355 corridor. The degree to which each build alternative meets these objectives is discussed below. The build alternative that best improves mobility, accessibility, capacity, and safety would provide the greatest inducement for business to expand or relocate in the MD 355/I-270 Technology Corridor.

Local Business and Employment Effects by Build Alternative

Alternative 1 - The No-Build Alternative would result in worsening congestion along MD 355, and longer travel times between the Ridge Road/Snowden Farm Parkway intersection and the Montgomery Village Avenue/Midcounty Highway intersection (33% longer in the AM peak hour and 29% longer in the PM peak hour, compared to existing). The No-Build Alternative would not improve the crash rate on MD 355, which is higher than the statewide average for similar type facilities.

Alternative 2 - Under Alternative 2, intersection improvements would be made at the 16 intersections having unacceptable levels of congestion in 2030 under the No-Build Alternative. Even with these improvements, congestion would still be unacceptable at 8 of the 16 intersections in 2030. Because improvements would be accommodated within existing rights-of-way, significant impacts to existing businesses are not anticipated. However, because Alternative 2 would not provide increased lane capacity, and would not reduce traffic volumes or accident rates on MD 355, it would not substantially improve mobility or accessibility to business sites along MD 355.

Alternative 4 Modified - Potential impacts associated with roadway widening and new pedestrian and bicycle improvements would occur in areas with commercial uses along Wightman Road and Snouffer School Road.

The raised median on Wightman Road would prohibit left turns into or out of the Wightman Road Office Park. However, U-turns could be made at the nearest signalized intersections. Left turns out of the Goshen Oaks Shopping Center would be prohibited at both entrances to the shopping center due to the existing median along Goshen Road and the proposed raised median along Wightman Road. Traffic exiting the shopping center with a destination on westbound Goshen Road or southbound Wightman Road could make a right turn at the Wightman Road entrance and proceed to the signalized intersection at Goshen Road. Businesses along Snouffer School Road in the Montgomery County Airpark Industrial Park would be impacted in several ways: strip takes, loss of parking spaces, and/or prohibition of left turns in and out. Many of the businesses require shipments by tractor trailer. The prohibition of left turns into and out of the businesses adjacent to Snouffer School Road would require tractor trailers to find alternative access. Even with the proposed widening to

four lanes, Snouffer School Road would be too narrow for U-turns by tractor trailers. Therefore, in order for tractor trailers to depart one of the businesses in a southbound direction, they would have to turn into the industrial park at Bonanza Way and use Bonanza Way, Beechcraft Avenue, and Mooney Drive as a loop road to access the traffic signal at Mooney Drive, where they could safely make a left turn.

Other impacts of access would be attributable to the raised median which would prevent left turns into and out of some businesses, requiring customers to make U-turns at the nearest intersection. Most of the commercial shopping strips happen to be in the vicinity of intersections, thus minimizing the interference with access to the type of business that is most dependent upon convenience and drive-by customers. Loss of parking, on the other hand, would be problematic at several businesses, including the Horizon Plaza strip shopping center and Absolute Furniture which would both lose almost half their parking, and Braddock Motors whose parking is already extremely limited. These businesses would be compensated for the loss of parking spaces. However, this loss could potentially impact the volume of business over the long-term. If this alternative should be selected, additional coordination would be undertaken with the business owners to address impacts associated with access and loss of parking.

Alternative 4 Modified would require property from 67 businesses. Due to the need to maintain access to the numerous driveways along the corridor, each of which is a potential conflict point, Alternative 4 Modified would trend toward a higher accident rate along the alternative than Alternatives 8 and 9 which would not have driveways (see **Table 3-4**). Alternative 4 Modified would result in more failing intersections on MD 355 than any other alternative, and only a moderate diversion of traffic from MD 355 (comparable to the diversion with Alternative 8, but less than with Alternative 9). The moderate diversion of traffic is due to the fact that Alternative 4 Modified is so far from MD 355. Alternative 4 Modified would also be furthest removed from the Technology Corridor, where the majority of the economic growth is planned to occur.

Alternative 5 - Of all build alternatives, Alternative 5 would have the greatest direct impact on businesses resulting from widening of the existing highway and the addition of service roads and a shared use path. Impacts include property acquisition, changes in access, and loss of parking. The new service roads were proposed to improve safety by reducing the number of access points along the alternative. Alternative 5 would require the displacement of three businesses and property acquisition from 82 businesses.

A driveway at the Milestone Shopping Center would be closed, but alternative access is available at either of the two adjacent signalized intersections. Two businesses would be displaced on the west side of MD 355, south of Oxbridge Drive. (One is a small florist and the other is currently abandoned). If the properties were redeveloped, access would be provided via a new service road in the rear of the businesses. In the northeast quadrant of the Middlebrook Road intersection, the driveway would be closed that currently allows access to CVS Pharmacy and the building containing Popeyes, Subway, and Caspian Kabob. These businesses would be required to share the service road in front of Kinder Care, resulting in a minor inconvenience for customers of these businesses.

Two driveways along MD 355 at the Middlebrook Square Shopping Center, which currently accommodate right-in/right-out movements, would be closed. This would substantially alter access to the businesses in Middlebrook Square Shopping Center, necessitating that customers access the shopping center from Middlebrook Road or Gunners Branch Road. The circuitous access could reduce patronage at some of the businesses. The 7-Eleven would also lose their entrance from MD 355, leaving only the access on Gunners Branch Road.

Access to the Fox Chapel Shopping Center would be substantially altered by the closure of three existing entrances from MD 355. Access from MD 355 would be permitted at a signalized intersection with Gunners Branch Road. This intersection would continue to be the only shopping center entrance that would permit left turns exiting the shopping center. Should this alternative be selected, additional coordination would be undertaken with the property owner to address the possibility of providing a median opening on Middlebrook Road to allow left turns out of the shopping center at a new intersection at Blunt Road and Middlebrook Road.

A new service road would provide access to the rear of the Verizon, Cricket, and Carolina Furniture, and their entrances from MD 355 would be closed. The Beer and Wine store would be displaced by the highway widening.

The entrances to the cluster of businesses inside the semicircle formed by Gunners Branch Road would be consolidated by providing access from a new service road that would be accessible at Archdale Road. This service road would result in a loss of parking at Germantown Beer and Wine, and slightly modify access to the businesses.

The Exxon Station and Captain Morris Seafood would share a single driveway to a new service road accessing both businesses.

A new service road would be constructed to consolidate the entrances to the Animal Hospital, the Flaming Pit, the Salvation Army, Tri Peaks Center, and National Interest Security Company into a single access point at the traffic signal with Professional Drive. The service road would eliminate approximately 40% of the parking at Tri Peaks Center, and a large percentage of the parking at the Flaming Pit. While these businesses would be compensated for their loss of parking, this loss could potentially affect the volume of business in the long-term. Left turns in and out would be accommodated at the signalized intersection at Professional Drive. Across MD 355, access to the Seven Eleven would be limited to one entrance on Professional Drive. Just south of Travis Avenue, the MD 355 entrance to the Mattress Mart and Brusters would be closed. These businesses would only be accessible from an entrance on Travis Avenue. The loss of an entrance that is visible from MD 355 would reduce the businesses' identity with the MD 355 corridor, and motorists could eventually be less inclined to stop.

Between Watkins Mill Road and Montgomery Village Avenue, a new service road would be provided to consolidate the number of entrances to the car dealerships in Village Overlook. The service road would eliminate numerous parking spaces at the car dealerships. South of Christopher Avenue, the entrance to the Holiday Inn, Wells Fargo, the Acura dealership, Four Eyes, and Ichiban Restaurant would be consolidated with a new service road.

The median would be closed at Lockheed Martin, and access to Lockheed Martin would be limited to right-in/right-out. Traffic desiring to turn left (northbound) when exiting Lockheed Martin would exit the parking lot at the signalized intersection at Christopher Avenue.

Alternative 5 would reduce intersection congestion and consolidate the number of driveways along MD 355, between Ridge Road and MD 124, from 62 to 17, thereby reducing travel time along the alternative and marginally improving safety. Over the long-term, the consolidation of driveways may affect patronage of some businesses, particularly businesses that thrive on convenience. Because Alternative 5 would not provide a substantial increase in highway capacity or construct a new access-controlled highway, Alternative 5 would not result in a major change in traffic volumes on MD 355 in the design year (2030) compared to the No Build scenario (see **Table 3-7**). MD 355 would continue to experience a mix of local traffic destined for residences/business along MD 355 and regional traffic using MD 355 to avoid peak hour congestion on I-270. Mixing of local and through traffic contributes to higher accident rates, which is one of the consequences of a highway network that is missing key components (see discussion in **Section 3.0 – Need No. 3**).

Alternative 8 and Northern Terminus Options A, B, and D – Except where Alternative 8 follows existing roadways, the alignment generally traverses open space, and therefore would have few physical impacts on adjacent businesses and employment. The proposed widening of the Middlebrook Road/MD 355 intersection would generally be accomplished within the existing right-of-way, but would require the acquisition of slope easements and temporary construction easements. Driveways along MD 355 would not be closed, consolidated, or changed. The proposed widening of the Watkins Mill Road/MD 355 intersection would involve a strip take from King Volkswagen. A median opening along Watkins Mill Road would be closed, prohibiting left turns into and out of the King Volkswagen dealership. Because right-of-way has been reserved through the All Souls Cemetery, Option A would not impact the existing building or cemetery lots. Option B would result in a sliver of right-of-way acquisition from the Cemetery along Brink Road. Option D would take property from the cemetery that is outside the Master Plan reservation, but would also not impact the existing building or cemetery lots. However, Option A would be a dominant feature of the viewshed at the Cemetery, while Option D would be less visible.

Alternative 8 would improve travel times in the MD 355 corridor in the AM peak hour compared to the No-Build Alternative. The provision of a new access-controlled highway would result in a moderate diversion of traffic from MD 355. However, Alternative 8 would result in a gap in the Midcounty Highway between Watkins Mill Road and Montgomery Village Avenue, which would limit the diversion of traffic from MD 355 compared to Alternative 9, and result in unacceptable congestion at 5 intersections on MD 355 south of Montgomery Village Avenue.

Alternative 9 and Northern Terminus Options A, B, and D – Similar to Alternative 8, Alternative 9 would have few impacts on adjacent businesses and employment. Like Alternative 8, the proposed improvements at the intersection of Middlebrook Road and MD 355 would require minor slope and construction easements. At Watkins Mill Road, no

change in access and no property acquisition would occur at King Volkswagen. The All Souls Cemetery would be affected with Option A, B, or D, as described above.

Because Alternative 9 would provide a new access-controlled highway for its entire length, travel time along the alternative would be less than with any other build alternative. Alternative 9 would provide the most efficient route (i.e., safest, quickest, most accessible route) between the existing Midcounty Highway and future Snowden Farm Parkway. By connecting to Snowden Farm Parkway to the north and existing Midcounty Highway to the south, Alternative 9 would result in a longer, continuous, access-controlled highway than any other build alternative. This is a primary reason that Alternative 9 would result in greater diversion of traffic from MD 355 (see comparison on **Table 3-7**). The diversion of traffic from MD 355 could affect retail businesses due to the decrease in drive-by traffic. The extent to which a business would suffer a decrease in customers would vary depending upon whether the business is an “opportunity” business or a “destination” business. Opportunity businesses are those at which a motorist may stop when he sees the business along his route, even though it was not his planned destination. Examples include gas stations, fast food, and convenience stores. A reduction in drive-by traffic would be expected to reduce the number of customers at the opportunity businesses. The vast majority of businesses along MD 355 are destination businesses. Such businesses have a customer base that will drive a reasonable distance to shop at these stores because they have a loyal customer base, a known product, name recognition, provide a good value, or are the industry leader in their specialty. The destination businesses along MD 355 include the grocery stores, big box stores, banks, restaurants, automotive businesses, furniture, and equipment rentals. These businesses are not as dependent on drive-by traffic.

Tax Base Effects

Because all build alternatives would require some right-of-way acquisition, including the displacement of as many as two residences or 3 businesses, there would be a minor loss of future property tax revenues associated with any of the build alternatives. However, this loss would be more than offset by the property tax revenues from future development in the MD 355/I-270 Technology Corridor that would be supported by the transportation improvements under the build alternatives. Since Alternative 9 would provide significant increase in transportation capacity and mobility within the study area, Alternative 9 is anticipated to provide a greater stimulus to new development and employment than the other build alternatives.

4.7 Support for Master Planned Economic Growth

The No-Build alternative would not change or impact Area Master Plans or planned land use. However, the No-Build Alternative would not support planned growth and would not meet project objectives for improved vehicular, pedestrian, and bicycle access and mobility.

Alternative 2 would not change or impact Area Master Plans. Alternative 2 would help to alleviate future projected traffic congestion at intersections on MD 355, but because it adds no new highway lane capacity, it would result in minimal increase in mobility. It would not reduce traffic volumes or accident rates on MD 355, or provide new or enhanced pedestrian

or bicycle access within the project area. It would provide no incentive for businesses to locate or expand in the Technology Corridor.

Alternative 4 Modified is the furthest east of the build alternatives. Alternative 4 Modified proposes a larger facility than is planned for Wightman, Snouffer School, and Muncaster Mill Roads in Area Master Plans. Its construction could affect existing and future land use through changes in access at Montgomery County Airpark Industrial Park, and through induced pressure for changes in zoning in the northern portion of the project (see **Section 7. Indirect and Cumulative Effects**). Alternative 4 Modified would improve mobility and provide improved vehicular, pedestrian, and bicycle access. It would also provide a substantial increase in capacity (18.8 lane-miles). However, its distance from a majority of approved planned development would be the limiting factor in its ability to accommodate growth in the Technology Corridor.

Alternative 5 would not change Area Master Plans but could alter existing land use due to proposed service roads. For example, the construction of service roads at some businesses would displace parking spaces, and in other cases would reduce accessibility from MD 355. These changes may result in a future reduction in customers and ultimately force some businesses to relocate. Alternative 5 would help to alleviate projected traffic congestion and would be close to many of the approved planned developments. However, because it would provide only 4.9 lane-miles of new highway capacity, it would not accommodate the levels of growth that are currently specified in the area Master Plans.

Alternative 8 and Northern Terminus Options - Alternative 8, Option A would not change Area Master Plans or alter planned land use. Right-of-way has already been acquired or reserved along portions of this alternative. Options B and D would alter existing land use and would require a change to Area Master Plans. The likelihood of Option D resulting in new development in the Agricultural Reserve is discussed in **Section 7. Indirect and Cumulative Effects**. South of the northern terminus options, Alternative 8 follows the Master Plan alignment and would be compatible with Area Master Plans. Alternative 8 would provide improved vehicular, pedestrian, and bicycle access and mobility in the project area. However, the alternative would stop at Watkins Mill Road, forcing motorists who want to continue south along existing Midcounty Highway to detour along local roads. This truncation of the Master Plan would limit the diversion of traffic from MD 355 to a moderate amount, and result in unacceptable intersection congestion along MD 355 south of Montgomery Village Avenue. Alternative 8 would improve the highway network by providing additional capacity along an access-controlled facility linking Clarksburg, Germantown, and Gaithersburg. Alternative 8 would result in a ladder configuration of major arterials in the I-MD 355/I-270 Technology Corridor, providing quick and convenient access to I-270 at several interchange locations. This would serve as an inducement for new businesses to locate in the MD 355/I-270 corridor, generating new jobs. Alternative 8 would also provide 17.9 lane-miles of new highway capacity that would accommodate a substantial portion of the development that is currently specified in the area Master Plans.

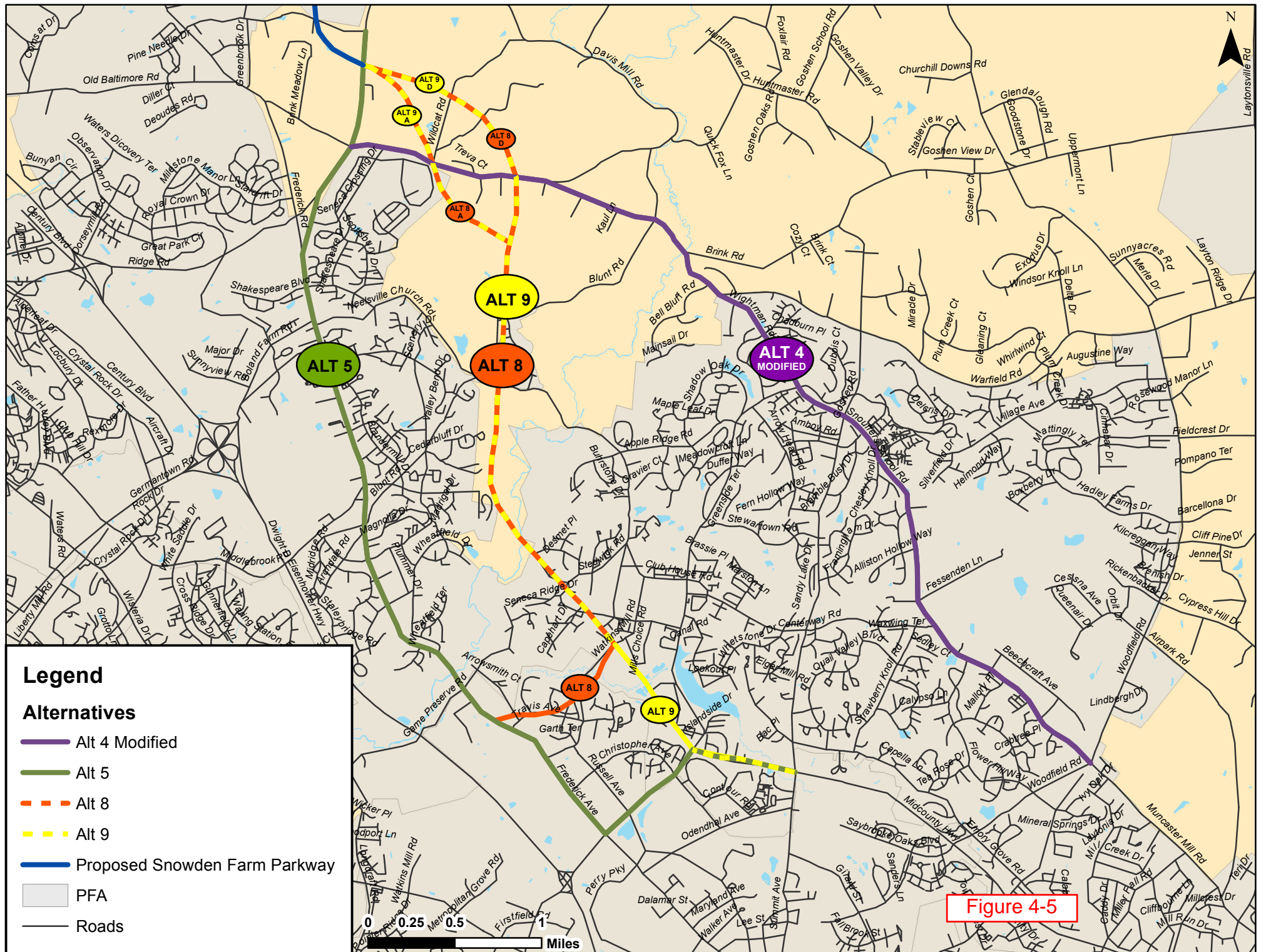
Alternative 9 and Northern Terminus Options would have impacts similar to those described for Alternative 8 above, from Ridge Road to Watkins Mill Road. Alternative 9

would continue on the Master Plan alignment at Watkins Mill Road and connect to the previously constructed portion of the Midcounty Highway. Alternative 9, Option A is specifically included in Area Master Plans; therefore, it would not change Area Master Plans or alter planned land use. All options of Alternative 9 would help alleviate future projected traffic congestion and would provide improved vehicular, pedestrian, and bicycle access and mobility in the project area. Alternative 9 would improve the highway network by providing additional capacity on an access-controlled facility linking Clarksburg, Germantown, and Gaithersburg. Alternative 9 would result in a longer, continuous, access-controlled facility (12.2 miles) than any other alternative. With a future potential connection to the Intercounty Connector (MD 200), Alternative 9 could provide a significant role in improving access and mobility between the Technology Corridor and the eastern portion of the County. The significant network, capacity, and safety improvements offered by Alternative 9 are the basis for Alternative 9 ranking higher than any other alternative in terms of mobility, diversion of traffic from MD 355, and accident rate along the alternative. Alternative 9 would result in a ladder configuration of major arterials in the MD 355/I-270 Technology Corridor, providing quick and convenient access to I-270 at several interchange locations. This would serve as an inducement for new businesses to locate in the I-270/MD 355 corridor, generating new jobs. In addition, Alternative 9 would maximize the number of lane-miles of new highway capacity (22.3), to fully accommodate the level of development specified in the area Master Plans. For these reasons, Alternative 9 would best serve the need of accommodating economic growth in the Technology Corridor.

4.8 Maryland Smart Growth Initiatives

In 1997, the Maryland General Assembly enacted a package of legislation collectively referred to as the Neighborhood Conservation and Smart Growth Initiative. The Maryland Smart Growth Program has three basic goals: to save valuable remaining natural resources and open space; to support and revitalize existing communities and neighborhoods; and to discourage sprawl development in rural areas. Smart Growth directs State funding for infrastructure to locally- designated growth areas, and discourages State investment in rural areas. The legislation covers State funding for highways, water and sewer construction, economic development assistance, and state leases or construction of new office facilities. The policy gives priority to central business districts, downtown cores, empowerment zones, and revitalization areas when funding infrastructure projects or locating new facilities. The Smart Growth legislation recognizes the important role local governments play in managing growth and determining the locations most suitable for growth. These growth areas, which are designated by local governments and approved by the State, are known as Priority Funding Areas (PFAs). In general, the Corridor Cities along I-270 are designated as PFAs (see **Figure 4-5**).

At this time, no State funding is planned for the Midcounty Corridor project. However, if State funding were approved, the project would be required to comply with the Priority Funding Areas Act. Alternative 5 would be entirely within a PFA. Portions of Alternatives 4 Modified, 8, and 9 are outside a PFA, but all of these alternatives serve to connect two PFAs.



A highway project that is not contained entirely within a PFA can, nevertheless, qualify for State funding provided it meets one of the specified exceptions. An exception is allowed for highway projects that serve to connect two PFAs. Exceptions must be approved by the Board of Public Works.

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